



# TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE MEETING MATERIALS

July 13, 2010

CALTRANS

BAY AREA TOLL AUTHORITY

CALIFORNIA TRANSPORTATION COMMISSION





## *Letter of Transmittal*

**TO:** Toll Bridge Program Oversight Committee  
(TBPOC)

**DATE:** July 8, 2010

**FR:** Program Management Team (PMT)

**RE:** TBPOC Meeting Materials Packet – July 13, 2010

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Herewith is the TBPOC Meeting Materials Packet for the July 13<sup>th</sup> meeting. The packet includes memoranda and reports that will be presented at the meeting. A Table of Contents is provided following the Agenda to help locate specific topics.

Attached is a map with directions to the meeting venue.

Attachment:

Driving Directions to the Bay Bridge Public Information Office on Treasure Island



# THE SAN FRANCISCO-OAKLAND BAY BRIDGE SEISMIC SAFETY PROJECTS

CALTRANS

BAY AREA TOLL AUTHORITY

CALIFORNIA TRANSPORTATION COMMISSION



**TBPOC MEETING**  
**July 13, 2010, 9:00am – 11:00am**  
**Public Information Office, Building 1, Room 169**  
**410 Avenue of the Palms, Treasure Island, CA**

<b>Topic</b>	<b>Presenter</b>	<b>Time</b>	<b>Desired Outcome</b>
<b>1. CHAIR'S REPORT</b>	S. Heminger, BATA	5 min	Information
<b>2. CONSENT CALENDAR</b> a. TBPOC Meeting Minutes: 1) June 3, 2010 Meeting Minutes* 2) June 28, 2010 Conference Call Minutes*  b. Contract Change Orders (CCOs): 1) Yerba Buena Island Detour CCO 105-S1 (Steel Fabrication for Viaduct Design Modifications)* 2) Self-Anchored Suspension (SAS) Superstructure CCO 139 (Partial for Mitigation Opportunities of East End Fabrication Strategy)*	A. Fremier, BATA A. Fremier, BATA  D. Noel, CTC	1 min 1 min  5 min	Approval Approval  Approval
<b>3. PROGRESS REPORTS</b> a. Final June 2010 Project Progress and Financial Update**	A. Fremier, BATA	3 min	Approval
<b>4. SAN FRANCISCO-OAKLAND BAY BRIDGE UPDATES</b> a. Yerba Buena Island Detour 1) Update  b. Yerba Buena Island Transition Structures No. 1 1) Update  c. Oakland Touchdown No. 1 1) Update  d. Mechanical, Electrical & Piping (MEP) Update 1) Bridge Lighting Assembly Procurement Contract Addendum No. 1*	T. Anziano, CT  T. Anziano, CT  T. Anziano, CT  T. Anziano, CT	5 min  5 min  5 min  10 min	Information  Information  Information  Approval
<b>5. DUMBARTON/ ANTIOCH BRIDGE SEISMIC RETROFIT UPDATE</b>	T. Anziano, CT	15 min	Information
<b>6. OTHER BUSINESS</b>			
<b>7. TBPOC/ ABF/ TYLMN DISCUSSION</b> a. Self-Anchored Suspension (SAS) Superstructure Mitigation and Acceleration Update	PMT	60 min	Information
<b>Next TBPOC Meeting: August 5, 2010, 10:00 AM – 1:00 PM</b> <b>Mission Bay Office, Oakland, CA</b>			

\*Attachments

\*\*Stand-alone document included in the binder



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<b>2</b>	<b>2</b>	<b>CONSENT CALENDAR</b> a. TBPOC Meeting Minutes 1) June 3, 2010 Meeting Minutes* 2) June 28, 2010 Conference Call Minutes*  b. Contract Change Orders (CCOs) 1) Yerba Buena Island Detour CCO 105-S1 (Steel Fabrication for Viaduct Design Modifications)* 2) Self-Anchored Suspension (SAS) Superstructure CCO 139 (Partial for Mitigation Opportunities of East End Fabrication Strategy)*
<b>3</b>	<b>3</b>	<b>PROGRESS REPORTS</b> a. Final June 2010 Project Progress and Financial Update**
<b>4</b>	<b>4</b>	<b>SAN FRANCISCO-OAKLAND BAY BRIDGE UPDATES</b> a. Yerba Buena Island Detour 1) Update  b. Yerba Buena Island Transition Structures No. 1 1) Update  c. Oakland Touchdown No. 1 1) Update  d. Mechanical, Electrical & Piping (MEP) Update 1) Bridge Lighting Assembly Procurement Contract Addendum No. 1*
<b>5</b>	<b>5</b>	<b>DUMBARTON/ ANTIOCH SEISMIC RETROFIT UPDATE</b>
<b>6</b>	<b>6</b>	<b>OTHER BUSINESS</b>
<b>7</b>	<b>7</b>	<b>TBPOC/ABF/TYLMN DISCUSSION</b> a. Self-Anchored Suspension (SAS) Superstructure Mitigation and Acceleration Update

\*Attachments

\*\*Stand-alone document included in the binder

## **ITEM 1: CHAIR'S REPORT**

No Attachments

## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** July 8, 2010

**FR:** Andrew Fremier, Deputy Executive Director, BATA

**RE:** Agenda No. - 2a1  
Consent Calendar  
Item- TBPOC Meeting Minutes  
June 3, 2010 Meeting Minutes

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**Recommendation:**  
**APPROVAL**

**Cost:**  
N/A

**Schedule Impacts:**  
N/A

**Discussion:**  
The Program Management Team has reviewed and requests TBPOC approval of the June 3, 2010 Meeting Minutes.

**Attachment(s):**  
June 3, 2010 Meeting Minutes



# TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

## MEETING MINUTES

June 3, 2010, 10:00 AM – 12:00 PM

Mission Bay Office, Conference Room 1906, 325 Burma Road, Oakland, CA

TBPOC-PMT pre-briefing, 10:00 AM – 11:00 AM

TBPOC meeting, 11:00 AM – 12:00 PM

**Attendees:** TBPOC Members: Steve Heminger, Bimla Rhinehart, and Cindy McKim  
PMT Members: Brian Maroney (for Tony Anziano), Andrew Fremier, and Stephen Maller  
Participants: Ade Akinsanya, Amer Bata, Pochana Chongchaikit, Michele DiFrancia, Mike Forner, Ted Hall, Paul Jefferson, Beatriz Lacson, Rick Land, Peter Lee, Effie Milionis, Dina Noel, Mo Pazooki, Gary Pursell, Pete Siegenthaler, Ken Terpstra, Jon Tapping, Deanna Vilchek, and Jason Weinstein

Convened: 11:16 AM

Items	Action
<b>1. CHAIR'S REPORT</b> <ul style="list-style-type: none"><li>S. Heminger, the Chair, welcomed C. McKim to her first TBPOC meeting as Director of Caltrans and bona fide committee member.</li></ul>	
<b>2. CONSENT CALENDAR</b> <ul style="list-style-type: none"><li>a. TBPOC Meeting Minutes<ul style="list-style-type: none"><li>1) May 6, 2010 Meeting Minutes</li></ul></li><li>b. Contract Change Orders (CCOs)<ul style="list-style-type: none"><li>1) Yerba Buena Island Detour CCO 1-S6 (Maintain Traffic), \$500,000 to pay for flagging and directing of traffic in and around the jobsite.</li></ul></li></ul>	<ul style="list-style-type: none"><li>The TBPOC <b>APPROVED</b> the Consent Calendar, as presented.</li></ul>
<b>3. PROGRESS REPORTS</b> <ul style="list-style-type: none"><li>a. Draft Project Progress and Financial Update May 2010<ul style="list-style-type: none"><li>A. Fremier presented, for TBPOC information, the Draft Project Progress and Financial Update May 2010. The final version with the most current actual costs, forecasts and progress photographs will be</li></ul></li></ul>	<ul style="list-style-type: none"><li>The TBPOC confirmed <b>APPROVAL</b> of the Draft Project Progress and Financial Update May 2010 by the PMT through TBPOC-delegated authority.</li></ul>



(continued)

Items	Action
<p>approved by the PMT through TBPOC-delegated authority for distribution on June 8. TBPOC confirmation of this approval was requested.</p>	
<p><b>4. PROGRAM ISSUES</b></p> <p>a. West Approach Landscaping PS&amp;E</p> <ul style="list-style-type: none"> <li>• K. Terpstra described, for TBPOC information, the scope of work for the West Approach landscape project - the Plans, Specifications and Estimate (PS&amp;E) for which have been submitted to Headquarters Office Engineer.</li> <li>○ The project is estimated at \$4.3 million.</li> </ul>	<ul style="list-style-type: none"> <li>• Although presented as an informational item, the TBPOC voted to <b>APPROVE</b> the West Approach Landscaping PS&amp;E.</li> <li>• Staff to provide the TBPOC an update on the West Approach Right-of-Way issue at the July TBPOC meeting.</li> </ul>
<p><b>5. SAN FRANCISCO-OAKLAND BAY BRIDGE (SFOBB) UPDATES</b></p> <p>a. Self-Anchored Suspension (SAS) Superstructure</p> <p>1) Update</p> <ul style="list-style-type: none"> <li>• B. Maroney reported that there has been significant progress in the shop drawing approval process for fabrication of lift 13.</li> <li>○ Design, fabrication and erection are ongoing simultaneously.</li> <li>○ QC and QA are going well and have been impressive.</li> <li>○ There is a good team working here and in China to effect an accelerated pace.</li> </ul> <p>2) Mr. Kang, ZPMC, Visit to Bay Area</p> <ul style="list-style-type: none"> <li>• B. Maroney reported that Mr. Kang plans to be in the Bay Area when the first shipment of tower sections arrives in mid-July.</li> <li>○ An invitation to visit the project site was sent to Mr. Kang.</li> <li>○ The Chair suggested (1) having Messrs. Kang, Luffy and Flowers attend the TBPOC July meeting, (2) arranging activities around</li> </ul>	<ul style="list-style-type: none"> <li>• Staff to change the TBPOC July 8 meeting date as soon as Mr. Kang's Bay Area schedule is confirmed.</li> </ul>

***(continued)***

	Items	Action
	<p>the tower shipment arrival, and (3) scheduling a dinner.</p> <ul style="list-style-type: none"> <li>• The Chair suggested having a TBPOC conference call with the team to discuss: (1) lifts 13/14 issues and negotiations with the contractor; and (2) planned PIO activities for tower arrival and Mr. Kang's participation.</li> </ul> <p>b. Yerba Buena Island Detour (YBID)</p> <p>1) Update</p> <ul style="list-style-type: none"> <li>• B. Maroney reported that the project is within budget and maybe complete by October 2010.</li> <li>○ M. Forner indicated that change in CHP enforcement is scheduled to occur mid-June.</li> </ul> <p>c. Yerba Buena Island Transition Structures (YBITS) No. 1</p> <p>1) Update</p> <ul style="list-style-type: none"> <li>• B. Maroney reported that YBITS No. 1 contractor MCM will move in as soon as YBID contractor C. C. Meyers moves out.</li> </ul> <p>d. Oakland Touchdown (OTD) No. 1</p> <p>1) Update</p> <ul style="list-style-type: none"> <li>• M. Forner reported that the contractor is forecasting a June 9 project completion.</li> <li>○ The Chair noted that publicizing the completion of this on-schedule, within-budget job might be a good way of capitalizing on a positive event.</li> </ul>	<ul style="list-style-type: none"> <li>• Staff to arrange a TBPOC teleconference two weeks from now to discuss the suggested agenda items.</li> </ul>                      <ul style="list-style-type: none"> <li>• Staff to coordinate with the PIO about an OTD1 completion celebration, if needed.</li> </ul>
7	<p><b>DUMBARTON/ ANTIOCH BRIDGE RETROFIT UPDATE</b></p> <p>a. Dumbarton Bridge Addendum #2</p> <ul style="list-style-type: none"> <li>○ J. Weinstein presented, for TBPOC formal approval, Addendum #2 to change the bid opening date from</li> </ul>	<ul style="list-style-type: none"> <li>• The TBPOC <b>APPROVED</b>, with a 2 to 1 vote, the</li> </ul>

***(continued)***

	Items	Action
	May 25 to June 15, 2010 for the Dumbarton Bridge Seismic Retrofit Project, plus additional changes requested therein.	Dumbarton Bridge Addendum #2, as presented.
	<p>b. Antioch Bridge Update</p> <ul style="list-style-type: none"> <li>• M. Pazooki gave an update on the status of the contract awarded to California Engineering Contractors (CEC), including developments in the environmental and bearings aspects of the project.</li> <li>○ As to traffic impact, there will be bridge closures one direction at a time for the Antioch Bridge; and one-lane, two-lane and full-bridge closures for the Dumbarton Bridge, with the latter likely happening in late 2011.</li> </ul>	<ul style="list-style-type: none"> <li>• Staff to update the TBPOC when the full Dumbarton Bridge closure date gets closer.</li> </ul>
9	<b>OTHER BUSINESS</b> <ul style="list-style-type: none"> <li>• N/A</li> </ul>	

**Adjourned: 11:48 AM**

***(continued)***

**TBPOC MEETING MINUTES**

June 3, 2010, 10:00 AM – 12:00 PM

Mission Bay Office, Conference Room 1906, 325 Burma Road, Oakland, CA

**APPROVED BY:**

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**STEVE HEMINGER**, TBPOC Chair  
Executive Director, Bay Area Toll Authority

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Date

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**BIMLA G. RHINEHART**, TBPOC Vice-Chair  
Executive Director, California Transportation Commission

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Date

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**CINDY McKIM**  
Director, California Department of Transportation

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Date



## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** July 8, 2010

**FR:** Andrew Fremier, Deputy Executive Director, BATA

**RE:** Agenda No. - 2a2  
Consent Calendar  
Item- TBPOC Meeting Minutes  
June 28, 2010 Conference Call Minutes

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**Recommendation:**  
**APPROVAL**

**Cost:**  
N/A

**Schedule Impacts:**  
N/A

**Discussion:**  
The Program Management Team has reviewed and requests TBPOC approval of the June 28, 2010 Conference Call Minutes.

**Attachment(s):**  
June 28, 2010 Conference Call Minutes



# TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

## CONFERENCE CALL MINUTES

June 28, 2010, 4:00 PM – 5:00 PM

**Attendees:** TBPOC Members: Steve Heminger, Bimla Rhinehart and Cindy McKim  
PMT Members: Tony Anziano, Andrew Fremier, and Stephen Maller  
Participants: Michele DiFrancia, Malcolm Dougherty, Beatriz Lacson, Rick Land, Peter Lee, Brian Maroney, Bart Ney, Dina Noel, Randy Rentschler, Jon Tapping, Ken Terpstra, and Jason Weinstein

Convened: 4:04 PM

Items		Action
<b>1. SELF-ANCHORED SUSPENSION (SAS) SUPERSTRUCTURE MITIGATION AND ACCELERATION UPDATE</b>		
a. Lift 13/14 Issues and Negotiations with Contractor <ul style="list-style-type: none"><li>• Discussion/comments included:<ul style="list-style-type: none"><li>○ T. Anziano referred to the matrix prepared by ABF reflecting a 2013 seismic safety opening, claim resolution options with cost implications; and summarized the draft CCO covering modification of order of work, incentive and liquidated damage provisions that enumerated six modifications to the contract.</li><li>○ J. Tapping referred to the Executive Summary comparing the CT Rough Order of Magnitude (ROM) figures with ABF's ROM on East End Delay Cost, Proposed Incentive-Disincentive Provisions, and Other Mitigation/Acceleration Actions, and reported on his negotiations with ABF to date.</li><li>○ Responsibility for the delay, arbitration probability, incentive/disincentive concerns, proposed actions and perceived</li></ul></li></ul>		<ul style="list-style-type: none"><li>• The TBPOC members confirmed their availability for a conference call on July 8, 3:00pm – 4:00pm, to discuss</li></ul>

(continued)

Items	Action
<p>consequences were discussed.</p> <ul style="list-style-type: none"><li>○ The TBPOC directed the PMT to take more time to discuss/review the negotiation material, develop a counter to ABF, and then recommend next steps to the TBPOC.</li></ul> <p>b. PIO Activities for Tower Arrival and Mr. Kang's Visit to Bay Area</p> <ul style="list-style-type: none"><li>• B. Ney noted that there are three potential dates connected to this item and corresponding activities planned:<ul style="list-style-type: none"><li>1) July 9 or 10: Tower Arrival – event scheduled.</li><li>2) July 13: B. Ney referred to the “July 13 TBPOC Meeting(s)/Tower Arrival Ceremony/Mr. Kang Visit Itinerary” and summarized the activities planned for that date.</li><li>3) July 20, 21 or 22: Tower Erection - this will focus on the initial erection of the first tower shaft and will include the media, local and state politicians.</li></ul></li></ul>	<p>the following:</p> <ul style="list-style-type: none"><li>(1) PMT recommendation on next steps toward resolution of East End issues; and</li><li>(2) Other items (see below)</li></ul> <ul style="list-style-type: none"><li>• Include an update on the July 13 itinerary in the July 8 TBPOC conference call agenda.</li></ul>
<p><b>2. OTHER BUSINESS</b></p> <ul style="list-style-type: none"><li>• T. Anziano provided the following update on the Dumbarton Bridge Seismic Retrofit contract.<ul style="list-style-type: none"><li>○ The recent bid opening resulted in seven bidders. The lowest bidder was Shimmick Construction. Compliance with bid requirements is being reviewed as are protests lodged by some bidders.<ul style="list-style-type: none"><li>➤ C. McKim indicated that she would call her fellow members with an update prior to the July 8 TBPOC conference call.</li><li>➤ The Chair pointed out that these issues need to be dealt with in a timely manner as a re-bidding</li></ul></li></ul></li></ul>	<ul style="list-style-type: none"><li>• Include an update on the Dumbarton Bridge Seismic Retrofit contract in the July 8 TBPOC conference call agenda.</li></ul>

**(continued)**

Items	Action
<p>would affect the project schedule.</p> <ul style="list-style-type: none"><li>• On another matter, A. Fremier suggested carrying over the lower deck gawk screen to the upper deck.<ul style="list-style-type: none"><li>○ T. Anziano will follow up with Operations</li></ul></li></ul>	

Adjourned: 5:01 PM

### **CONFERENCE CALL MINUTES**

June 28, 2010, 4:00 PM – 5:00 PM

#### **APPROVED BY:**

\_\_\_\_\_  
**STEVE HEMINGER**, Executive Director  
Bay Area Toll Authority

\_\_\_\_\_  
Date

\_\_\_\_\_  
**BIMLA G. RHINEHART**, Executive Director  
California Transportation Commission

\_\_\_\_\_  
Date

\_\_\_\_\_  
**Cindy McKim**, Director  
California Department of Transportation

\_\_\_\_\_  
Date



## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** July 8, 2010

**FR:** Dina Noel, Assistant Deputy Director Toll Bridge Program, CTC

**RE:** Agenda No. - 2b1  
Item- Yerba Buena Island Detour Contract Change Order No. 105-S1 –  
Additional Funds - Steel Fabrication for Viaduct Design Modifications

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**Recommendation:**  
**APPROVAL**

**Cost:**  
CCO 105-S1: \$250,000.00

**Schedule Impacts:**  
None

**Discussion:**

**CCO 105-S1 in the amount \$250,000** is necessary to pay for the outstanding steel fabrication costs concerning modifications to the steel viaduct structure. The original CCO 105, issued for an amount of \$2,140,640, provided compensation for additional steel fabrication costs resulting from Department ordered enhancements to the viaduct plans issued in July of 2007. The change order provided a \$1,540,640 lump sum payment for work performed by the viaduct steel fabricator in South Korea and provided \$600,000 in force account funding for fabrication modifications required to be performed locally in order to mitigate potential delays to the project.

It has now been determined that the cost of fabricating the temporary bracing, which was performed locally, will exceed the original estimate and additional funding shall be required.

**Attachment(s):**

1. Draft CCO: 105-S1
2. Draft CCO Memorandum: 105-S1
3. YBID Implementation Strategy Memo, June 28, 2010

**CONTRACT CHANGE ORDER**

Change Requested by: Engineer

CCO: 105	Suppl. No. 1	Contract No. 04 - 0120R4	Road SF-80-12.6/13.2	FED. AID LOC.:
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To: CC MYERS INC

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the Engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

**Extra Work at Force Account:**

Provide additional funds for the work specified to be performed as extra work at force account under the original Change Order No. 105.

Estimated Cost of Extra Work at Force Account .....\$250,000.00

Estimated Cost: Increase ☒ Decrease ☐ \$250,000.00

By reason of this order the time of completion will be adjusted as follows: 0 days

**Submitted by**

Signature	Resident Engineer BILL CASEY	Date
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**Approval Recommended by**

Signature	Area Construction Manager DEANNA VILCHECK	Date
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**Engineer Approval by**

Signature	SFOBB Construction Manager MIKE FORNER	Date
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We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

**NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.**

**Contractor Acceptance by**

Signature	(Print name and title)	Date
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**CONTRACT CHANGE ORDER MEMORANDUM**

DATE: 12/2/2009 Page 1 of 2

TO: MIKE FORNER / DEANNA VILCHECK			FILE: E.A. 04 - 0120R4	
FROM: JEANNIE BALDERRAMOS			CO-RTE-PM SF-80-12.6/13.2	
FED. NO.				
CCO#: 105	SUPPLEMENT#: 1	Category Code: CHXX	CONTINGENCY BALANCE (incl. this change) \$0.00	
COST: \$250,000.00 INCREASE <input checked="" type="checkbox"/> DECREASE <input type="checkbox"/>			HEADQUARTERS APPROVAL REQUIRED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
SUPPLEMENTAL FUNDS PROVIDED: \$0.00			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
CCO DESCRIPTION: Viaduct Fabrication Costs			PROJECT DESCRIPTION: CONSTRUCT ROUTE 80 TEMP BYPASS STRUCTURE	
Original Contract Time: 475 Day(s)	Time Adj. This Change: 0 Day(s)	Previously Approved CCO Time Adjustments: 1660 Day(s)	Percentage Time Adjusted: (including this change) 349 %	Total # of Unreconciled Deferred Time CCO(s): (including this change) 0

**THIS CHANGE ORDER PROVIDES FOR:**

Provide additional funding for steel fabrication costs related to design enhancements implemented by the Department concerning the Viaduct steel truss.

This contract was awarded to construct a temporary detour for both eastbound and westbound I-80 traffic that allows for the tie in of the east span of the new San Francisco Oakland Bay Bridge (SFOBB) to Yerba Buena Island. The detour consist of three main structures, the East Tie-In (ETI) to the bridge, the West Tie-In to the island and the Viaduct structure between the two tie ins. The contract was awarded as a performance based project with the contractor responsible for meeting the design criteria specified in the contract.

The viaduct consists of 4 spans of a double deck steel truss approximately 20 meters wide and 320 meters long with a weight of over 4,300 metric tons. The original Change Order No 105 provided compensation for additional steel fabrication costs pertaining to Department ordered design enhancements to the Viaduct structure that were incorporated into the approved Viaduct plans dated July 19, 2007.

The major design changes included a complete redesign of the Span 51 cantilever section that abuts the ETI structure to provide for an improved conform between those 2 structures, the addition of temporary bracing to account for stresses on the structure during the concrete deck placement and various modifications to the structure's floor beams and stringers to provide for an improved structure performance.

Change Order No. 105 provided compensation at an agreed lump sum of \$1,540,640 for additional fabrication costs incurred by the contractor's designated fabricator for the Viaduct steel truss Dongkuk Structures & Construction Co., Ltd who performed the work in South Korea. Compensation for steel fabrication modifications to the stringers and floor beams that had already been shipped to the project site and the fabrication of the temporary steel bracing was to be performed locally in order to mitigate project delays. Compensation for this locally performed work was specified to be performed as extra work at force account at an estimated cost of \$600,000.

It has now been determined that the cost of fabricating the temporary steel bracing will exceed the original estimate for this work. The bracing consists of 2 major components, lateral bracing on the upper deck stringers (50 supports) at an approximate weight of 23,000 kilograms and lateral bracing of the upper deck floor beams (32 supports) at an approximate weight of 7,000 kilograms.

Compensation for the work shall be paid as extra work at force account at an estimated cost of \$250,000.00 which shall be financed from the contract's contingency funds. A cost estimate is on file.

No adjustment of contract time is warranted as the work will not affect the controlling operation.

This change was concurred with by Ken Terpstra - Project Manager, and Jaime Gutierrez - Project Engineer.

Maintenance concurrence is not required as this is an administrative change order and will not affect any permanent roadway features.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**CONTRACT CHANGE ORDER MEMORANDUM**

EA: 0120R4 CCO: 105 - 1

DATE: 12/2/2009 Page 2 of 2

<b>CONCURRED BY:</b>			<b>ESTIMATE OF COST</b>		
Construction Engineer:	Jeannie Balderramos, RE	Date		THIS REQUEST	TOTAL TO DATE
Bridge Engineer:		Date	ITEMS	\$0.00	\$0.00
Project Engineer:	Jaime Gutierrez, PE	Date	FORCE ACCOUNT	\$250,000.00	\$850,000.00
Project Manager:	Ken Terpstra, PM	Date	AGREED PRICE	\$0.00	\$0.00
FHWA Rep.:		Date	ADJUSTMENT	\$0.00	\$1,540,640.00
Environmental:		Date	<b>TOTAL</b>	\$250,000.00	\$2,390,640.00
Other (specify):		Date	<b>FEDERAL PARTICIPATION</b>		
Other (specify):		Date	<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input checked="" type="checkbox"/> NONE <input type="checkbox"/> NON-PARTICIPATING (MAINTENANCE) <input type="checkbox"/> NON-PARTICIPATING		
District Prior Approval By:		Date	FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type) <input type="checkbox"/> CCO FUNDED PER CONTRACT <input type="checkbox"/> CCO FUNDED AS FOLLOWS		
HQ (Issue Approve) By:		Date	FEDERAL FUNDING SOURCE    PERCENT _____ _____ _____		
Resident Engineer's Signature:		Date			



**Yerba Buena Island Detour, Contract No. 04-0120R4**  
**Contract Change Order Implementation Strategy**  
**June 28, 2010**

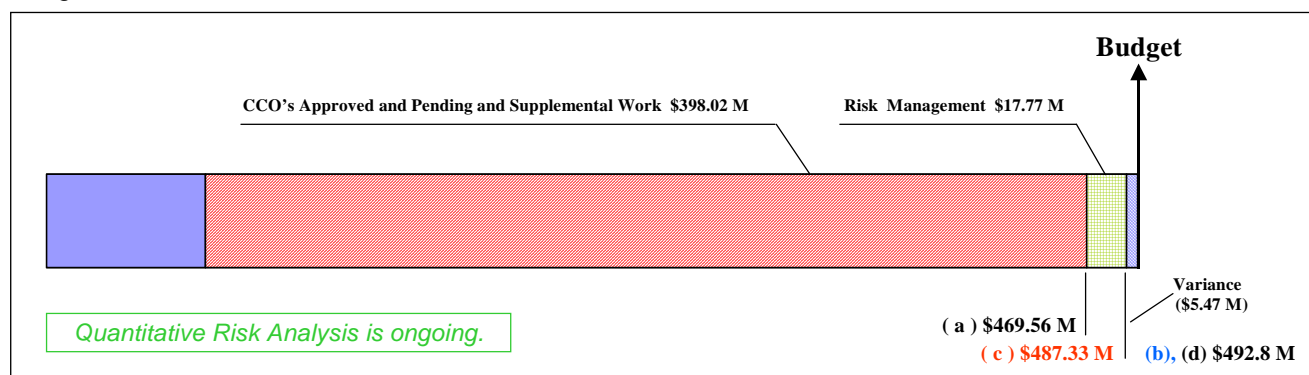
**DRAFT**

Yerba Buena Island Detour (Contract 04-0120R4)			
Contract Award:	March 10 <sup>th</sup> , 2004	Suspension Days:	302 Working Days
Original Working Days:	475 Working Days	Contract Extensions:	1660 Working Days
Original Contract Completion:	July 27th, 2005	Projected Contract Completion:	December 10, 2010

## Introduction

Two memos were developed to outline a strategy for a revised YBID project that enhanced YBID viaduct design, developed tie-in design (east and west) in-house, improved the retrofit of the YBI viaduct (replacing the top deck of the viaduct rather than retrofitting in place) and advanced and incorporated select YBITS foundation work. The two memos are "San Francisco-Oakland Bay Bridge Corridor Schedule Mitigation – Strategy for South-South Detour Contract Completion" issued December 14, 2006, and "Recommendation to Construct Select Yerba Buena Island Transition Structure Foundations by Contract Change Order" issued on December 25, 2006. This strategy will result in substantial increases in the cost of the YBID project.

As approved at the June 2009 TBPOC meeting the revised budget for the YBID project is 492.8M. This figure was established in May 2009 using all available information to date. This figure is within the projects approved budget balance beam, as shown below:



## Scope of Work for YBID

The revisions to the original scope of work currently associated with the Yerba Buena Island Detour Project have been assigned into the following categories with their associated estimated cost:

Category	Scope of Work	Current Budget (June 2009)	In Progress Status Update from June 09 Approved Budget	
			Current	Delta
(0)	Original Bid Items, Baseline CCOs (1 through 48), and State Furnished Materials	\$83.7	\$83.7	\$0
(1)	YBID New Viaduct	\$40.1	\$42.6	\$2.5
(2a)	West Tie-In Existing Viaduct Phase 1	\$40.1	\$40.1	\$0.0
(2b)	West Tie-In Phase 2	\$21.8	\$17.9	(\$3.9)
(3)	East Tie-In	\$140.0	\$143.4	\$3.4
(4)	YBI Transition Structures Advance Foundations	\$104.3	\$104.7	\$0.4
(5)	Administrative Issues and General CCOs	\$37.8	\$47.9	\$10.1
<b>Subtotal</b>		<b>\$467.8</b>	<b>\$480.3</b>	<b>\$12.5</b>
<b>Contingency</b>		<b>\$25.0</b>	<b>\$12.5</b>	
<b>Approved Budget</b>		<b>\$492.8</b>		

Contract payments as of June 20, 2010: \$441.0M

As shown, the current status of CCOs required to modify the original scope of the YBID work as defined in Categories 1 through 5 is \$396.5M. The status of each category of work is discussed in the succeeding pages of this report.

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**Bid Items, Baseline CCOs, & State Furnished Material**

**0**

The break down of Category (0) is as follows:

Original Contract Amount	\$ 71.2 million
Baseline CCOs (1 through 48)	\$ 12.1 million
State Furnished Materials	\$ 0.4 million
<b>Total</b>	<b>\$ 83.7 million</b>

**Baseline Contract Change Orders (1 through 48)**

CCO #	Description	Executed Date	Cost
1	Flagging and Traffic Control	5/13/2004	\$100,000.00
1S1	Additional Funds for Flagging and Traffic Control	2/9/2007	\$200,000.00
2	Bidder Compensation	5/8/2004	\$1,575,000.00
3	Partnering	9/7/2004	\$25,000.00
4	DRB	9/7/2004	\$100,000.00
5	Federal Trainee Program	11/12/2004	\$20,000.00
5S1	Non-Journey Person Training	3/10/2005	\$50,000.00
6	Removal of DBE/SBE Monitoring	2/10/2005	\$0.00
7	Sampling and Analysis Work	8/30/2004	\$30,000.00
8	SWPPP Maintenance Sharing	8/30/2004	\$75,000.00
9	Additional Photo Survey/Public Relations	9/14/2004	\$50,000.00
10	Temporary Shuttle Van Service	7/16/2004	\$650,000.00
10S1	Additional Funds for Temporary Shuttle Van Service	6/23/2005	\$100,000.00
10S2	Additional Funds for Temporary Shuttle Van Service	1/12/2007	\$500,000.00
11	Utility Potholing	9/14/2004	\$100,000.00
12	Just-In-Time Training (RSC Pavement)	2/10/2005	\$5,000.00
13	PMIV Document Management System	11/3/2004	\$486,743.50
14	Temporary Suspension	5/19/2004	\$0.00
15	Archaeology Investigation	7/19/2004	\$30,000.00
15S1	Additional Funds for Archaeology Investigation	4/22/2005	\$15,000.00
16	Roadway Profile at WTI	Voided	N/A
17	Modify Drainage at G4 Entry Vault	10/24/2006	\$108,217.45
18	Access Control Measures	9/8/2004	\$50,000.00
19	EDR1 Alignment Modification	5/12/2005	\$0.00
20	A490 Bolts	10/23/2006	\$0.00
21	Removal /Disposal of Stairway	4/13/2005	\$14,060.00
22	Clean Stairs and Walkways	5/24/2005	\$35,000.00
23	Shared Field Data System (ShareArchive)	Voided	N/A
24	East and West Tie-In Temporary Suspension	2/1/2005	\$2,181,467.40
24S1	Read Inclinometer/Adjust Equipment Costs	10/18/2005	\$29,782.99
<b>Total for Baseline Contract Change Orders</b>			<b>\$12,107,527</b>

CCO #	Description	Executed Date	Cost
24S2	Temporary Suspension Partially Extended	5/2/2006	\$4,812,631.58
24S3	Contract Days Extension/TRO Compensation	Voided	N/A
25	Bent 48, 49R, 52R Outside Boundary	3/24/2005	(\$19,000.00)
26	Bent 48 Articulation	4/22/2005	\$0.00
27	Bent 52L Footing Conflict	1/19/2006	\$94,386.51
28	Hydroseed Around W2 Columns	3/24/2005	\$20,000.00
29	Replacement of Surveillance Camera	3/24/2005	\$3,542.00
30	Additional Elastic Response Analysis	5/31/2005	\$10,700.00
31	Soil Analysis Outside Plan Limits	6/27/2005	\$20,000.00
32	SFPUC Permit Specification Change	5/17/2005	\$0.00
33	Design Enhancements	Voided	N/A
34	Pole Structure Welding Specification Revision	9/30/2005	\$0.00
35	Revision of East Tie-In Design Criteria	Voided	N/A
36*	Extend Limits of Viaduct Demolition	Voided	N/A
37	4 Hr Emergency Travel Way	5/13/2005	\$22,500.00
37S1	Emergency Travel Way Falsework	Voided	N/A
38	Revision of West Tie-In Design Criteria	8/4/2005	\$0.00
39	Provide Shuttle Service to USCG	6/27/2005	\$10,000.00
40	Sewer Pipe Material Change	9/26/2005	\$1,561.95
41	Bent 49L Utility Relocation	Voided	N/A
42	Bent 48R Pile Load Test	9/12/2005	\$20,000.00
42S1	Bent 52R Pile Load Test	12/15/2005	\$5,000.00
43	Material On Hand Specification Change	9/16/2005	\$75,953.88
43S1	Addition of YBITS Advance to Material On Hand	Voided	N/A
44	Electrical Call Box Relocation		\$47,480
45	Additional SWPPP	2/21/2006	\$250,000.00
46	Southgate Road Reopening	3/8/2006	\$50,000.00
47	Hazardous/Non-Hazardous Soil Removal	12/15/2005	\$100,000.00
48	Buried Man-Made Objects	12/15/2005	\$50,000.00
			<b>\$12,107,527</b>

- The scope of work for CCO No. 36 was completed and compensated for under the larger scope of CCO No. 76.

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**SSD New Viaduct**

**1**

Progress of Work

Fabrication of the structural steel truss took place at Dongkuk S&C in South Korea. With the placement of traffic onto the detour, the construction of the Viaduct is substantially complete. Minor punch list work remains.

Status of Contract Change Orders: YBID New Viaduct:

CCO	Method of Payment	Description	HQ Status	TBPOC Status	CCO Status	Current Estimate/ Actual Cost	Change from June 09 Approved Budget
49	LS	Stringer and Floor Beam Design Study	N/A	N/A	Executed 5/2/2006	\$109,183	
49S1	FA	Truss Design Modifications (Changes to Stringer and Floor Beam Connections)	I&A 12/08/06	N/A	Executed 8/17/2006	\$150,000	
49S2	FA		I&A 12/08/06	N/A	Executed 12/18/2006	\$100,000	
Subtotal (CCO #49 and Supplements)						\$359,182	
50	FA	Stand Alone Viaduct Design	N/A	N/A	Executed 5/8/2006	\$325,000	\$60,000
50S1	FA		I&A 9/21/06	N/A	Executed 10/16/2006	\$300,000	
50S2	FA		I&A 12/08/06	N/A	Executed 12/18/2006	\$100,000	
50S3	FA		I&A 2/09/07	N/A	Executed 2/13/07	\$175,000	
50S4	FA		I&A 12/21/09	N/A	Executed 12/22/09	\$30,000	
50S5	FA		I&A 05/06/10		In Progress	\$30,000	
Subtotal (CCO #50 and Supplements)						\$960,000	
54	LS	Deck Drainage	N/A	N/A	Executed 5/2/07	\$8,000	
55	LS	Viaduct Fabricator Change (SGT Closeout)	I&A 7/08/07	Approved 6/27/07	Executed 8/7/07	\$5,665,330	
55S1	LS	SGT Fabrication Closeout - Dongkuk Materials	I&A 1/24/08	Approved 3/5/08	Executed 3/17/08	\$980,600	
59	LS	Water Blast Rebar Cages	N/A	N/A	Executed 2/22/07	\$5,000	\$15,000
59S1	LS	Additional funds, Water Blast Rebar Cages	N/A	N/A	Executed 11/24/08	\$5,000	
59S2	FA	Viaduct Rebar Cleaning	N/A	N/A	Executed 2/16/10	\$15,000	
60	LS	Construction of Bent Caps	I&A 6/13/07	Approved 6/27/07	Executed 6/18/07	\$7,435,950	
67	FA	Viaduct/ETI Interface Modifications (Design Cost)	I&A 5/14/07	N/A	Executed 9/27/07	\$800,000	
79	LS	Fabrication Cost for Viaduct Design Changes July '05 - October '06	I&A 7/19/07	N/A	Executed 8/7/07	\$803,400	
79S1	LS	Fabrication Cost for Viaduct Design Changes - July 05-Oct 06	I&A 6/13/08	N/A	Executed 8/4/08	\$75,860	
80	LS	Erection Costs for Viaduct Design Changes through October 2006	N/A	Approved 1/31/08	Executed 2/20/08	\$6,912,200	
82	FA	OGAC Paving and Expansion Dams	I&A 8/10/09	N/A	Executed 10/8/09	\$547,680	\$521,386
82S1	FA	Add funds AC Deck Grinding	I&A 12/17/09	N/A	Executed 12/22/09	\$120,000	
213	LS	Bent 48 Expansion Joint & Drainage Escalation	I&A 7/23/09	N/A	Executed 8/06/09	\$488,100	

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85	LS	Design of 300mm Waterline Relocation	N/A	N/A	Executed 3/17/08	\$12,480	
87	LS	Viaduct Shipping Escalation Costs	I&A 7/24/07	N/A	Executed 10/2/07	\$534,570	
87S1	LS	Viaduct Shipping Escalation Costs	I&A 1/14/08	N/A	Executed 1/30/08	\$200,000	
88	LS	Viaduct Fabrication Delays	I&A 7/19/07	N/A	Executed 8/7/07	\$954,460	
88S1	LS	Viaduct Fabrication Delays	I&A 8/22/07	N/A	Executed 9/27/07	\$776,630	
98	FA/LS	Viaduct Steel Storage and Handling Cost	I&A 5/30/08	N/A	Executed 6/18/08	\$845,370	
98S1	FA	Add Funds Steel Storage and Handling Cost	I&A 12/17/09	N/A	Executed 12/22/09	\$151,000	\$151,000
99	LS	Viaduct Erection Costs (Post Oct. 2006)	I&A 4/17/08	N/A	Executed 5/22/08	\$862,614	
100	FA	Viaduct Fabrication Costs (Post Oct. 2006)	I&A 1/22/08	N/A	Executed 1/28/08	\$650,000	
105	FA/LS	Dongkuk Fabrication and Temp Bracing Fabrication Costs (July 2007 Plans)	I&A 4/2/08	Approved 4/3/08	Executed 4/17/08	\$2,140,640	
<b>105S1</b>	<b>FA</b>	<b>Dongkuk Fabrication and Temp Bracing Fabrication (July 2007 Plans)- Added Funds</b>		<b>Pending</b>	<b>In Progress</b>	<b>\$250,000</b>	<b>\$250,000</b>
106	-	CCO Voided...previous scope of work was incorporated into CCO 105	-	-	-	-	-
107	LS	Furnish and Drive Erection Tower Falsework Piles	I&A 8/07/08	N/A	Executed 10/02/08	\$855,190	
111	FA/LS	USCG Parking Replacement and Protection	N/A	N/A	Executed 3/17/08	\$163,223	
111S1	LS	Additional costs USCG Parking Lot	N/A	N/A	Executed 6/30/08	\$8,940	
111S2	LS	Additional costs USCG Car Port Canopy	N/A	N/A	Executed 4/23/09	\$120,000	\$120,000
111S3	LS	Additional costs USCG Car Port Canopy	N/A	N/A	Executed 9/21/09	\$80,000	\$80,000
115	FA	Third VIA Shipping for CCO #67 July 07 plans	I&A 5/06/08	N/A	Executed 5/22/08	\$850,000	
128	LS	60% of Waterline Relocation and Viaduct Connection Modifications	I&A 8/18/09	N/A	Executed 10/8/09	\$533,123	(\$33,789)
128S1	LS	60 % of Waterline Design Mods and Impact Costs	N/A	N/A	Executed 1/20/10	\$145,428	
215	FA	Underground Waterline Excavation Costs	N/A	N/A	Executed 10/8/09	\$41,250	
215S1	FA	Underground Waterline Excavation- Add Funds	N/A	N/A	In Progress	\$110,000	
133	-	Lightweight Conc. Mix Design Spec Change	N/A	N/A	Executed 9/12/08	\$0	
134	LS	60% of Project Wide Electrical Changes	7/7/09	Approved 5/7/09	Executed 8/25/09	\$1,380,554	
196	LS	Revised Electrical Lighting	N/A	N/A	Executed 7/28/09	\$35,944	(\$174,056)
135	LS	Rebar Deck Escalation Costs	I&A 11/09/08	N/A	Executed 1/28/09	\$995,100	
136	FA/LS	Provide additional alternate entrance access to USCG Base	N/A	N/A	Executed 9/23/08	\$74,540	
136S1	FA/LS	Add Funds for access to USCG Base	N/A	N/A	Executed 1/6/09	\$100,000	\$100,000
136S2	FA/LS	Add Funds for access to USCG Base	I&A 3/27/09	N/A	Executed 3/30/09	\$400,000	\$400,000
136S3	FA/LS	Add Funds for access to USCG Base	I&A 9/22/09	N/A	Executed 3/30/09	\$350,000	\$350,000
138	LS	Waterline Relocation for Fire Hydrant (Conflicts with Span 49 Falsework)	N/A	N/A	Executed 9/22/09	\$278,200	
148	FA	USCG Road Canopy below Viaduct	I&A 8/27/08	N/A	Executed 9/23/08	\$500,000	
150	LS	Bent 52A Sewer Relocation	I&A 4/20/09	N/A	Executed 4/23/09	\$242,330	\$242,330

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152	LS	Relocate USCG Road for steel erection FW Towers at Span 51	I&A 1/06/09	N/A	Executed 2/4/09	\$336,420	
156	LS	Span 49 F/W Conflict w/ USCG Utilities	N/A	N/A	Executed 9/23/08	\$180,820	
163	LS	Viaduct Grade Conflict	N/A	N/A	Executed 6/12/09	\$83,202	(\$16,798)
173	LS	Viaduct Escalation	I&A 4/6/10	N/A	Executed 05/04/10	\$740,890	(\$259,110)
178	LS	Type 7 Fence at Barrier	I&A 7/31/09	N/A	Executed 8/25/09	\$457,356	\$374,176
178S1	LS	Type 7 Fence at Barrier	I&A 4/12/10	N/A	Executed 05/17/10	\$47,240	\$47,240
<b>178S2</b>	<b>LS</b>	<b>Type 7 Fence at Barrier</b>		<b>N/A</b>	<b>In Progress</b>	<b>\$207,690</b>	<b>\$207,690</b>
198	Credit/LS	60 % of Job Wide Stripping Plan (Viaduct Portion)		N/A	Executed 12/14/09	\$179,678	\$89,678
199	Credit	CCO Deleted	-	-	-	-	(\$100,000)
201	LS	Viaduct Steel Erection USCG Protective Netting	N/A	N/A	Executed 10/8/09	\$156,350	(\$73,650)
209	LS	Viaduct USCG Flagging & Delays (Span 51)	N/A	N/A	Executed 8/13/09	\$92,810	(\$47,190)
210	LS	Steel Erection Close Out	N/A	N/A	Executed 1/20/10	\$147,230	\$22,230
226	FA	Manhole Covers	N/A	N/A	Executed 2/8/10	\$30,000	\$30,000
238	FA	Additional Scuppers	N/A	N/A	Executed 1/20/10	\$100,000	\$100,000
242	FA	Vertical Clearance Signing	N/A	N/A	Executed 04/19/10	\$30,000	\$30,000
245	LS	OH Sign Illumination	N/A	N/A	Executed 05/19/10	\$5,220	\$5,220
<b>Current Forecast for YBID New Viaduct</b>						<b>\$42,617,795</b>	<b>\$2,419,357</b>

Budget Status

The Viaduct portion of the YBID was bid at \$26.74M. The projected additional costs in the December 14, 2006 Strategy Memorandum were estimated to be \$9M. The June 2009 revised additional cost estimate is \$40.1M with a current projection of \$42.6M. CCOs executed to date are \$42.0M.

**West Tie-In**

**Phase 1**

**2a**

Progress of Work

Phase 1 work was substantially complete with the move in of the Structure on September 03, 2007. Miscellaneous electrical and drainage work remain. WB On-ramp reopened on August 8, 2008 and was subsequently re-closed on September 8, 2009 to accommodate the demolition of the old structure.

Status of Contract Change Orders: West Tie-In Existing Viaduct (Phase 1)

CCO	Method of Payment	Description	HQ Status	TBPOC Status	CCO Status	Current Estimate/ Actual Cost	Change from June 09 Approved Budget
58	FA	Bridge Removal Plan	N/A	N/A	Executed 11/21/06	\$60,000	
58 S1	FA	Bridge Removal Plan	N/A	N/A	Executed 7/05/07	\$40,000	
61	FA	Advance Engineering (Work Plans and Submittals), Site Prep (Ramp Closures, Access Road), Civil Work (Grading), Structure Work (Material Procurement)	I&A 1/09/07	N/A	Executed 2/27/07	\$400,000	
61S1	LS/FA	Construction of Stage 1 Area and Substructure	I&A 5/16/07	Approved 6/27/07	Executed 5/18/07	\$9,995,644	

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66	FA	TMP – Video Equipment (WTI Phase 1)	N/A	N/A	Executed 7/20/07	\$175,000	
68	FA	Temporary Electrical Work	N/A	N/A	Executed 7/20/07	\$140,000	
68S1	FA	Temporary Electrical Work Stage 2, 3 & 4	I&A 12/02/07	N/A	Executed 10/31/07	\$510,000	
72	LS	Structure Work (Superstructure), and Temporary Shuttle Service	I&A 7/19/07	Approved 7/27/07	Executed 7/20/07	\$11,096,900	
76	LS	Labor Day Bridge Demolition and Move-In	I&A 7/19/07	Approved 7/27/07	Executed 7/20/07	\$2,240,300	
76S1	LS	Labor Day Bridge Move-In (Changeable Message Signs, Temporary Signs, Traffic Control, Bridge Removal, Bridge Move-In, Paving and Roadway Repairs, CCM Support Costs, City Traffic Officers)	I&A 8/28/07	Approved 8/24/07	Executed 9/27/07	\$10,144,140	
84	LS	Skid Track Foundations and Temporary Columns	I&A 7/27/07	Approved 7/27/07	Executed 7/31/07	\$3,980,000	
101	LS	Reconstruct Slab, West Bound On-ramp	I&A 4/02/08	N/A	Executed 4/17/08	\$846,140	
101S1	LS	WB Onramp Supplemental Work	I&A 1/06/09	N/A	Executed 2/4/09	\$149,560	
102	FA	Northside Drainage Work	N/A	N/A	Executed 4/4/08	\$60,000	\$76,578
102S1	LS	Northside Drainage Work	N/A	N/A	Executed 7/15/09	\$48,818	
102S2	FA	Northside Drainage Work – Add Funds	N/A	N/A	Executed 7/15/09	\$50,000	
102S3	FA	Northside Drainage Work – Add Funds	N/A	N/A	In Progress	\$30,000	
103	LS	Labor Day Weekend Closure Misc. Costs	N/A	N/A	Executed 2/20/08	\$173,140	
<b>Current Status for West Tie-In (Phase 1)</b>						<b>\$40,139,642</b>	<b>\$76,578</b>

Budget Status

The projected additional costs in the December 14, 2006 Strategy Memorandum were estimated to be \$40M. The June 2009 revised additional cost estimate is \$40.1M with a current projection of \$40.1M. CCOs executed to date are \$40.1M.

**West Tie-In**

**Phase 2**

**2b**

Progress of Work

With the placement of traffic onto the detour, Frames 1, 2, and 3 are substantially complete. Minor punch list work remains.

Status of Contract Change Orders: West Tie-In (Phase 2)

CCO	Method of Payment	Description	HQ Status	TBPOC Status	CCO Status	Current Estimate/ Actual Cost	Change from June 09 Approved Budget
62	LS	Construction of Phase 2 Foundations and Credits for Elimination of Bid Items 12 and 90	I&A 2/29/08	Approved 4/4/08	Executed 4/7/08	(\$4,649,850)	
200	FA	Shoring at Abutment 47A	N/A	N/A	Executed 11/19/09	\$50,000	(\$250,000)
71	LS	WTI Phase 2 Pile at Bent 46L/Slab Bridge Removal	I&A 7/24/07	N/A	Executed 7/20/07	\$384,130	
108	LS	Substructure	I&A 6/20/08	Approved 6/18/08	Executed 6/25/08	\$5,378,800	
117	FA	Surface Drainage (Southside)	N/A	N/A	Executed 1/6/09	\$150,000	
128	LS	20% of Waterline Relocation and Stringer Stiffeners	I&A 8/18/09	N/A	Executed 10/8/09	\$177,708	\$71,654
128S1	LS	20 % of Waterline Design Mods and Impact Costs	N/A	N/A	Executed 1/20/10	\$48,476	
134	LS	20% of Project Wide Electrical Changes	7/7/09	Approved 5/7/09	Executed 8/25/09	\$460,185	

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196	LS	Revised Electrical Lighting	N/A	N/A	Executed 7/28/09	\$11,981	(\$58,019)
141	LS/FA	Superstructure Construction	I&A 11/13/08	Approved 11/18/08	Executed 11/25/08	\$13,200,000	
141S1	ACUP	Superstructure Construction Completion Incentive (Release of Frame 1 Bent Cap FW)	I&A 5/15/09	Approved 5/15/09	Executed 5/15/09	\$1,500,000	
143	LS/ID	Civil Work (EB Onramp and Mainline)	I&A 6/11/09	N/A	Executed 7/28/09	\$156,436	(\$3,618,566)
143S1	LS	Roadway AC Overrun	N/A	N/A	Executed 2/8/10	\$62,249	
161	LS	T7-Line Detour	I&A 11/10/08	N/A	Executed 11/25/08	\$403,965	
168	LS	Rebar H.S. Rod Modifications		N/A	Executed 03/22/10	\$147,390	(\$221,010)
208	LS	Concrete and Miscellaneous Changes		N/A	Executed 05/04/10	\$131,600	
198	Credit/ LS	20% of Job Wide Striping Plan (WTI Phase 2 Portion)		N/A	Executed 12/14/09	\$59,893	(\$10,212)
202	--	WTI K-rail Deletion and ETI K-rail plans	N/A	N/A	Executed 11/4/09	(\$42,000)	(\$42,000)
220	LS	Flashing Beacons and Additional Tunnel Lighting	N/A	N/A	Executed 11/19/09	\$198,000	\$198,000
221	FA	Barrier Rail Transition Cover Plate at B47		N/A	Executed 12/15/09	\$25,000	\$25,000
243	LS	Falsework Delay	N/A	N/A	Executed 05/19/10	\$22,510	\$22,510
251		Down Drain Relocation	N/A	N/A	In Progress	\$20,000	\$20,000
<b>Current Status for West Tie-In (Phase 2)</b>						<b>\$17,896,472</b>	<b>(\$3,862,643)</b>

Budget Status

The Contractor's bid price for the West Tie-In was \$9.0M. Based on the Department's December 14, 2006 Strategy Memorandum, the costs associated with the Phase 2 West Tie-In work were estimated to be an additional \$13.0M. The June 2009 revised additional cost estimate is \$21.8M, with a current projection of \$17.9M. CCOs executed to date are \$17.9M.

**East Tie-In**

**3**

Progress of Work

Bent 52A and skid bent foundation design packages were delivered October 2007. ETI design plans for the skid bents and skid beams were delivered March 15, 2008 and truss plans were delivered April 7, 2008.

Fabrication of the skid bents and skid beams took place at Thompson Metal Fab, Inc. in Vancouver, WA and the fabrication of the truss took place at Stinger Welding Inc. in Coolidge, AZ.

The existing SFPUC sanitary sewer pump station has been relocated with the new pump station up and running. The East Tie-In structure was successfully moved into place and traffic switch onto the detour on September 8, 2009.

Removal of the skid bent towers and beams is in progress.

Status of Contract Change Orders: East Tie-In

CCO	Method of Payment	Description	HQ Status	TBPOC Status	CCO Status	Current Estimate/ Actual Cost	Change from June 09 Approved Budget
63	FA	Advance Engineering (Work Plans and Submittals)	I&A 8/22/07	N/A	Executed 9/27/07	\$800,000	
69	LS	Procurement of Pump/Control Panel for Pump Station Relocation	N/A	N/A	Executed 10/10/07	\$111,280	
69S1	LS	Construction for Pump and Control Panel for Relocated Pump Station	I&A 12/19/07	N/A	Executed 3/17/08	\$499,996	
69S2	LS	Sewer Pump Electrical Changes	I&A 2/25/09	N/A	Executed 4/08/09	\$8,953	
92	FA	ETI AT&T Fiber Optic Relocation	N/A	N/A	Executed	\$175,000	



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					12/17/07		
93	LS/FA	Lead Paint Mitigation Existing Truss (Span YB-4)	I&A 2/13/08	N/A	Executed 2/20/08	\$563,725	(\$3)
93S1	LS	Additional Lead Abatement at Span YB-4	I&A 6/8/09	N/A	Executed 6/17/09	\$347,417	
93S2	LS	Additional Platform Rental and Adjustments	I&A 10/5/09	TBD	Executed 10/8/09	\$300,000	\$300,000
104	FA	Pier E-1 Access Towers	N/A	N/A	Executed 1/30/08	\$150,000	
104S1	FA	Additional Funds for Pier E-1 Access Towers	N/A	N/A	Executed 2/14/09	\$45,000	\$45,000
<b>104S2</b>	<b>FA</b>	<b>Additional Funds for Pier E-1 Access Towers</b>	<b>In Progress</b>	<b>N/A</b>	<b>In Progress</b>	<b>\$50,000</b>	<b>\$50,000</b>
113	LS	Relocate Waterline in Conflict with Northern Skid Bent Footings	N/A	N/A	Executed 3/17/08	\$167,990	
128	LS	20% of Waterline Relocation and ETI Exterior Stringer Stiffeners	I&A 8/18/09	N/A	Executed 10/8/09	\$177,708	(\$128,346)
128S1	LS	20 % of Waterline Design Mods and Impact Costs	N/A	N/A	Executed 1/20/10	\$48,476	
137	LS	Pump station Water Tank Demo	N/A	N/A	Executed 6/26/08	\$114,490	
90	LS	Bent 52A and Skid Bent Footings and Credits for Eliminated Bid Items 10 and 42	I&A 3/26/08	Approved 4/4/08	Executed 4/14/08	\$11,308,380	
97	FA	Bent 52A and Skid Bent Footing's Material Procurement	I&A 11/06/07	N/A	Executed 11/19/07	\$850,000	
121	LS	Construct Stage 1 Soil Nail Wall, Upper East Tie-In area	N/A	N/A	Executed 3/17/08	\$142,670	
121S1	LS	Construct Stage 2 Soil Nail Wall, Upper East Tie-In area	N/A	N/A	Executed 3/18/09	\$518,130	
162	LS	Bent A3 Shoring	I&A 3/30/09	N/A	Executed 4/01/09	\$268,235	
180	LS	Skid Bent Footing Backfill at A4-A6 and B4-B6	I&A 5/20/09	N/A	Executed 6/12/09	\$237,000	
127	FA	RTU – 8 Service Platform	N/A	N/A	Executed 9/03/08	\$75,000	
134	LS	20% of Project Wide Electrical Changes	7/7/09	Approved 5/7/09	Executed 8/25/09	\$460,185	
196	LS	Revised Electrical Lighting	N/A	N/A	Executed 7/28/09	\$11,981	(\$58,019)
129	LS	Skid Bent and Truss Steel Erection	I&A 11/05/08	Approved 11/10/08	Executed 11/25/08	\$14,712,500	\$749,940
129S1	LS	Skid Bent and Truss Steel Erection Acceleration	I&A 3/09/09	Approved 3/5/09	Executed 4/01/09	\$535,000	
129S2	LS	Skid Bent and Truss Steel Erection Incentive	I&A 6/9/09	Approved 6/4/09	Executed 6/17/09	\$1,177,000	
179	LS	ETI Truss Steel Erection Falsework Foundations	I&A 4/20/09	N/A	Executed 4/08/09	\$312,000	
234	LS	ETI Skid Bent/Beam Erection Interferences and Guy Cables	N/A	N/A	Executed 1/20/10	\$54,120	
236	LS	ETI Truss L8 North FW Redesign (Buried Man Made Object)	N/A	N/A	Executed 1/20/10	\$23,720	
<b>236S1</b>	<b>LS</b>	<b>Truss L8 North FW Redesign</b>		<b>N/A</b>	<b>In Progress</b>	<b>\$100,000</b>	
<b>181</b>	<b>LS</b>	<b>Skid Bent/Beam and Truss Erection Support</b>		<b>N/A</b>	<b>In Progress</b>	<b>\$250,000</b>	
206	LS	Skid Bent Steel Erection Closeout Costs	N/A	N/A	Executed 1/20/10	\$176,670	
214	LS	ETI Truss Steel Erection Closeout Costs		N/A	Executed 1/20/10	\$645,210	
112	FA	Material Procure Skidbent (1532 Tower Legs)	I&A 1/10/08	Approved 2/4/08	Executed 2/19/08	\$2,000,000	
112S1	FA	Material Procure ETI Superstructure	I&A 3/03/08	Approved 3/5/08	Executed 3/17/08	\$8,500,000	
112S2	FA	Material Procure ETI Temporary Bypass Structure	I&A 6/04/08	Approved 6/16/08	Executed 6/25/08	\$3,500,000	
112S3	FA	Material Procure - Additional Funds	I&A 10/31/08	Approved 11/13/08	Executed 11/25/08	\$3,000,000	
112S4	FA	Material Procure - Additional Funds	I&A 7/7/09	Approved 7/15/09	Executed 7/16/09	\$1,500,000	



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116	FA/LS	Fabricate Superstructure & Skidbent	I&A 6/04/08	Approved 6/16/08	Executed 8/8/08	\$14,166,180	\$249,560
116S1	FA/LS	Skidbeam Design Modifications and Shipping Costs	I&A 12/19/08	Approved 12/23/08	Executed 2/3/09	\$1,896,750	
116S2	FA/LS	Skidbeam Design Modifications and Shipping Costs	I&A 7/7/09	Approved 7/15/09	Executed 7/16/09	\$300,000	
140	LS	Truss Steel Fabrication	I&A 9/04/08	Approved 9/04/08	Executed 9/23/08	\$10,920,525	
140S1	ACUP	Truss Fabrication Incentive	I&A 6/17/09	Approved 9/04/08	Executed 7/6/09	\$300,000	
166	LS	Skid Bent & Beam Fabrication Acceleration	I&A 12/22/08	Verbal Approval 11/06/08 Approved 12/23/08	Executed 1/28/09	\$2,028,950	
166S1	ACUP	Skid Bent & Beam Fabrication Incentive	I&A 5/15/08	Approved 12/23/08	Executed 5/15/09	\$900,000	
167	LS	TMF – Shop Drawing Delay	I&A 3/16/09	N/A	Executed 5/6/09	\$632,670	
184	LS	Truss Design Modifications and Acceleration Costs (Partial Payment)	I&A 5/20/09	Approved 6/4/09	Executed 6/12/09	\$3,000,000	
184S1	LS	Truss Design Modifications and Acceleration Costs (Partial Payment)	I&A 7/31/09	Approved 8/6/09	Executed 8/11/09	\$4,393,420	
187	FA	Temporary Bracing for Truss Exterior Stringers	N/A	N/A	Executed 7/16/09	\$150,000	\$1,000,000
193	LS	Skid Beam Design Modifications	I&A 7/7/09	N/A	Executed 7/16/09	\$256,140	
144	FA	Expansion Joint Mock-up	I&A 8/26/08	N/A	Executed 9/23/08	\$850,000	
144S1	FA	Expansion Joint Fabrication	I&A 2/03/08	Approved 2/5/09	Executed 4/06/09	\$2,900,000	
144S2	-	Revised Expansion Joint Plan Sheets	I&A 7/1/09	N/A	Executed 8/05/09	\$0	
144S3	FA	Additional Funds for Expansion Joints	I&A 11/24/09	Approved 11/5/09	Executed 11/24/09	\$1,000,000	
231	FA	Expansion Joint Steel Skid Test Plates	N/A	N/A	Executed 12/15/09	\$100,000	
233	LS/FA	Expansion Joint Skid Resistant Treatment	N/A	N/A	Executed 11/17/09	\$106,915	
149	FA	Bearing Fabrication	I&A 11/03/08	Approved 11/10/08	Executed 11/25/08	\$1,600,000	
149S1	FA	Additional FA Funds for Bearing Fabrication / Testing	I&A 10/15/09	N/A	Executed 11/19/09	\$400,000	
153	LS	Concrete Deck and barrier starter steel	I&A 6/23/09	Approved 6/4/09	Executed 7/6/09	\$2,389,940	(\$378,266)
154	LS	East Pile Deduct at BW6, East Pile	N/A	N/A	Executed 9/04/08	(\$400)	
154S1	LS	Pile Anomaly Deduction at A6W & B52A	N/A	Approved 11/13/08	Executed 11/25/08	(\$2,183)	
160	FA	Existing Truss Retrofit Fabrication	I&A 4/20/09	N/A	Executed 4/08/09	\$350,000	
170	LS	Existing Truss Strengthening Erection YB-4	I&A 7/31/09	N/A	Executed 10/08/09	\$413,600	(\$336,400)
175	LS	Existing Truss Strengthening Erection Stability Bracing at YB 3	I&A 7/22/09	N/A	Executed 8/13/09	\$311,144	(\$188,856)
164	LS	ETI Steel Erection Crane Runway Trestle	I&A 11/20/08	ATP 11/14/08 Approved 12/23/08	Executed 12/6/09	\$2,700,000	
169	LS	Skid Beam Jobsite Handling and Local Transportation Costs	I&A 1/2/09	Approved 12/23/08	Executed 2/25/09	\$1,095,020	
171	LS	Bridge Roll Out / Roll In	I&A 6/8/09	Approved 6/4/09	Executed 6/17/09	\$10,147,370	(\$328,820)
172	LS	Lead Paint Abatement and Access at YB-3	I&A 12/18/08	N/A	Executed 2/4/09	\$240,450	\$30,000
174	FA	ETI Steel Barrier Rail Transition Fabrication	I&A 5/20/09	N/A	Executed 6/17/09	\$350,000	\$150,000

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174S1	--	ETI Steel Barrier Rail Transition Fabrication Design Changes	N/A	N/A	Executed 11/4/09	\$0	
174S2	FA	ETI Steel Barrier Rail Transition Fabrication	I&A 11/5/09	N/A	Executed 11/4/09	\$150,000	
177	LS	Span YB-4 Demolition	I&A 9/17/09	Approved 9/2/09	Executed 10/12/09	\$11,249,560	\$1,448,316
217	LS	Skid Bent Demolition	I&A 10/14/09	Approved 9/18/09	Executed 11/19/09	\$3,152,900	
212	LS	YB4 Roll Out Cut Free Demolition	I&A 9/2/09	N/A	Executed 10/08/09	\$209,720	
227		ETI Backfill		TBD	Executed 4/19/10	\$441,040	
186	LS	TMP (Lane Closures and CMS)	***	Approved 6/4/09	Executed 8/25/09	\$2,390,910	(\$609,090)
198	Credit/ LS	20% of Job Wide Stripping Plan (ETI Portion)		N/A	Executed 12/14/09	\$59,893	\$11,478
	-	ETI OGAC on Bridge Deck – Work Not Performed				\$0	
		District work – road signage, stage construction, SWPPP, Temp k-rail, etc – Work Not Performed		TBD	Future	\$0	(\$268,125)
204	FA	CCM's Labor Day Support Costs	I&A 7/14/09	Approved 7/15/09	Executed 8/6/09	\$3,500,000	
		Expansion Joint Seal Installation (previously CCO 189)					
		ETI Steel Barrier Rail Transition Installation (previously CCO 190)					
		Stability Bracing at YBI (Previously CCO 175)					
		Bearing Installation (Previously CCO 191)					
		Barrier Rail Installation (CCO 202 transmitted plans)					
204S1	FA	Additional Funds		Approved 3/4/10	Executed 4/14/10	\$2,500,000	\$1,100,000
216	FA	Pier E1 Barrier Rail Supports	N/A	N/A	Executed 10/08/09	\$175,000	\$175,000
225	FA	Steel Double Handling Costs	I&A 9/17/09	N/A	Executed 10/08/09	\$500,000	\$600,000
<b>225S1</b>	<b>FA</b>	<b>Steel Double Handling Costs – Additional Funds</b>		<b>N/A</b>	<b>In Progress</b>	<b>\$100,000</b>	
207	FA	Field Design Modifications Truss – Fabrication (U1, U8, L1, L8)	I&A 7/16/09	N/A	Executed 7/28/09	\$400,000	(\$874,590)
207S1	FA	Additional Funds to Field Design Modifications Truss – Fabrication (U1, U8, L1, L8)	N/A	N/A	Executed 10/27/09	\$100,000	
219	LS	Field Design Modifications Truss – Erection (U1, U8, L1, L8)	I&A 10/8/09	N/A	Executed 11/19/09	\$625,410	
<b>Current Status for East Tie-In</b>						<b>\$143,368,760</b>	<b>\$3,345,474</b>

Budget Status

The Contractor's bid price to construct the Contractor's design for the East Tie-In was \$6.0M with an additional \$1.46M to demolish the remaining portion of the ETI YB-4 span. The Department's December 14, 2006 Strategy Memorandum estimated an additional cost of \$34.0M to construct the Department's ETI roll out/roll in design concept. At the time, this estimate was based on minimal design information available. The June 2009 revised additional cost estimate is \$140.0M, with the current projection at \$143.4M. CCOs executed to date are \$142.9M.

**Yerba Buena Island Transition Structures  
Advance Foundations**

**4**

Progress of Work

The YBITS foundation and column locations being advanced are W3R/L, W4R/L, W5R/L, W6R/L, W7R/L, W7 Ramp and the temporary E.B. onramp abutment.

- W3     3L – substantially completed
- 3R – column (3<sup>rd</sup> lift of 3) in progress
- W4     4L – substantially completed
- 4R – substantially completed

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- W5 5L – pile driving complete. Excavation around driven piles, footing and 1<sup>st</sup> lift column construction in progress  
5R – excavation and installation of shoring complete; pile driving complete; footing and 1<sup>st</sup> lift column construction in progress
- W6 6L – substantially completed  
6R North – column (3<sup>rd</sup> lift of 3) in progress  
6R South – substantially completed
- W7 construction of the temporary soil nail wall and soldier pile shoring complete  
7L North – substantially complete  
7L South – substantially complete  
7R – column (2<sup>nd</sup> lift of 2) in progress  
Ramp – substantially completed
- EB On-ramp abutment – temporary shoring piles and permanent CIDH piles have been installed

Demolition of the main portion of the old structure (Bent 48 to YB4) is in progress.

Demolition of the old YB-1, YB-2 and YB-3 spans are complete.

Demolition of Abutment YB-1 to Bent 48 in progress

Status of Contract Change Orders: YBI Transition Structures Advance Foundations

CCO	Method of Payment	Description	HQ Status	TBPOC Status	CCO Status	Current Estimate/ Actual Cost	Change from June 09 Approved Budget
64	FA	YBITS W3L Site Prep and Grading and Construct Access Road	N/A	N/A	Executed 1/8/07	\$150,000	
64S1	LS/FA	YBITS W3L Foundation and Column to Splice Zone, Integrated Shop Drawings for W3L, Concrete Washouts, 50% of Flagging, and Traffic Controls	I&A 3/13/07	Approved 2/15/07	Executed 4/4/07	\$5,835,000	
65	FA	Demo Exist Bridge Adv. Planning	N/A	Approved 4/14/08	Executed 4/18/08	\$175,000	
65S1	LS	Demolish Exist Bridge (Bent 48 to YB-4)	I&A 4/06/09	Approved 5/7/09	Executed 5/21/09	\$9,227,660	
158	FA	Pile Procurement for Demo Falsework		N/A	Executed 9/12/08	\$980,000	
192	LS	Cable Bracing requires for Demolition of Spans YB-1, YB-2, and YB-3	N/A	N/A	Executed 8/13/09	\$111,540	
229	FA	Maintenance Traveler Salvage	N/A	N/A	Executed 12/14/09	\$100,000	
244	LS	Concrete Removal Bent 48 & Pier YB-1	N/A	N/A	In Progress	\$27,180	\$1,209,620
244S1	FA	Additional Concrete Removal Bent 48 & Pier YB-1	N/A	N/A	In Progress	\$75,000	
252	LS	USCG Impacts to Existing Bridge Demo	N/A	N/A	In Progress	\$21,400	
253	LS	Transite Pipe Removal on Existing Bridge Demo	N/A	N/A	In Progress	\$74,040	
254	LS	Cardboard Removal on Existing Bridge Demo	N/A	N/A	In Progress	\$20,460	
70	FA	Integrated Shop Drawings for Remaining YBITS Advance Locations (W3R, W4L/R, W5L/R, W6L/R, W7L/R, and W7 Ramp)	I&A 4/04/07	N/A	Executed 5/1/07	\$500,000	
70S1	FA	YBITS Advance – ISD 3R, 4R/L, 5R/L, 6R/L, 7R/L & ramp	I&A 1/17/08	N/A	Executed 1/30/08	\$450,000	
73	LS	YBITS W3R, W4R, W5R/L, W6R/L, and W7 Ramp Foundations and Columns	I&A 10/24/07	Approved 10/30/07	Executed 11/19/07	\$62,958,990	
75	LS	YBITS W7R/L Foundations and Columns	I&A 4/2/08	Approved 4/3/08	Executed 4/14/08	\$13,125,000	
75S1	LS	Bent W7 Structure Backfill	I&A 7/7/09	Approved 7/15/09	Executed 7/31/09	\$910,810	(\$697,560)
241	LS	Bent W7 Drainage Modifications		N/A	Executed 4/6/10	\$141,630	
77	LS	YBITS W4L Foundations and Columns	I&A 6/13/07	Approved 7/27/07	Executed 7/20/07	\$7,125,000	
78	FA	Relocation of Sewer Force Main	N/A	N/A	Executed 7/17/07	\$125,057	

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94	LS	YBITS Temp. EB Onramp Abutment Piles and Shoring	I&A 5/18/09	N/A	Executed 5/21/09	\$153,593	(\$146,407)
94S1		YBITS Temporary EB On Ramp Shoring & Grading		N/A	In Progress	\$100,000	
118	FA	Vibration & Elev. Monitoring at W5L	N/A	N/A	Executed 2/20/08	\$50,000	\$340,000
118S1	FA/LS/ID	Nimitz House vibration monitoring	N/A	N/A	Executed 8/05/08	\$50,050	
118S2	FA	Nimitz House vibration monitoring	N/A	N/A	Executed 12/14/09	\$40,000	
118S3	FA	Nimitz House vibration monitoring	I&A 2/16/10	N/A	Executed 2/22/10	\$100,000	
118S4	FA	Nimitz House vibration monitoring	I&A 4/20/10	N/A	Executed 4/27/10	\$100,000	
120	LS/Credit	CIDH Pile Mitigation Deduct	N/A	N/A	Executed 3/17/08	(\$400)	
124	FA/LS	Seismic Monitoring & Column Grounding	I&A 10/16/08	N/A	Executed 11/25/08	\$353,975	
124S1	LS	Seismic Monitoring & Column Grounding	N/A	N/A	Executed 05/19/10	\$1,100	\$1,100
126	FA	YBITS Excavation / Hazmat Disposal	I&A 4/7/08	Approved 4/3/08	Executed 4/17/08	\$500,000	
145	-	Revised Mass Concrete Spec. (Elimination of requirement from CCO's 73 & 75)	7/22/09	N/A	Executed 8/25/09	\$0	(\$157,730)
145S1	Credit	Credit for eliminated Mass Concrete Work		Current	In Progress	(\$657,730)	
147	LS	Add Cost W4R Foundation Construction	N/A	N/A	Executed 7/21/08	\$25,024	
155	FA	Excess Soil Offhaul	I&A 8/13/08	N/A	Executed 9/03/08	\$500,000	
159	LS	Redesign Bent W7 Soil Nail Wall	I&A 11/10/08	N/A	Executed 5/21/09	\$916,280	
165	LS	W7 Soil Nail Wall Delay Costs	I&A 4/20/09	N/A	Executed 4/08/09	\$152,208	
185	FA/ID	HazMat Excavation for Bridge Removal	8/10/09	N/A	Executed 8/25/09	\$106,000	\$106,000
211	LS	Duct Bank Revisions	N/A	N/A	Executed 8/13/09	\$129,152	\$34,772
232	LS/FA	Duct Bank Footing Removal & Drain Rock	N/A	N/A	Executed 11/19/09	\$105,620	
248		Duct Bank Utility Conflicts	N/A	N/A	In Progress	\$100,000	\$100,000
249	LS	Eliminate 210mm DIP Water Line		N/A	In Progress	(\$510,000)	(\$510,000)
255	FA	Clean & paint Rebar at Top of Columns		N/A	In Progress	\$200,000	\$200,000
<b>Current Status for YBI Transition Structures Advance Foundations</b>						<b>\$104,648,639</b>	<b>\$379,795</b>

Budget Status

The Department's December 25, 2006 Strategy Memorandum estimated the cost to construct Bents W3R/L, W4R/L, W5R/L, W6R/L, W7R/L, and W7 Ramp to be \$107M. In addition, the temporary E.B. onramp abutment shoring was added at a later date with no estimate revision. The Departments December 14, 2006 Strategy Memorandum estimated the additional demolition costs for the existing bridge (Bent 48 through YB-4) to be \$3.5M. The combined estimate for both was \$110.5M. The June 2009 revised additional cost estimate is \$104.3M with a current projection of \$104.6M. Total CCOs executed to date are \$104.6M.

Administrative Issues General CCOs

5

**Yerba Buena Island Detour, Contract No. 04-0120R4**  
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Progress of Work

Administrative issues that remain on the YBID contract are related to setting project milestones and determining time related overhead resulting from the contract time extensions, escalation costs, the increased scope of work, and other necessary changes to the contract.

The following list of target milestones has been incorporated into the project schedule. This information will be revised as more detailed schedule information is developed.

	Date	Status	Notes
W3L (foundation and column up to splice zone)	March 15 <sup>th</sup> , 2007	Complete	Finished 3/15/07
West Tie-In Phase 1 Viaduct Demo/Roll-In Complete	September 4 <sup>th</sup> , 2007	Complete	Finished 9/04/07
Access to W3R Available to CCM	January 2 <sup>nd</sup> , 2008	Partial access provided	Coordinating access with SAS
Upper East Tie-In Area Available to CCM (Revised October 2008)	December 2009	Partial access provided	Coordinating access with SAS
East Tie-In Roll-Out/Roll-In Complete (Revised October 2008)	September 7 <sup>th</sup> , 2009	Complete	Finished 9/8/09
Project Completion (Revised July 2009)	December 10, 2010		

The Department has extended TRO compensation at the original contract rate through December 10, 2010. The Contractor has completed a TRO audit. The Department is reviewing this information so that an appropriate TRO adjustment can be negotiated.

The Department continues to pursue a resolution to the remaining NOPC issues. Of the 18 NOPC issues, only three remain outstanding. Of the three it is anticipated that Viaduct CCO #128 will resolve NOPC #6, resolution of the existing structure demolition costs will resolve NOPC #15, and resolution of the TRO costs will resolve NOPC #18.

Status of Contract Change Orders: Administrative Issues

CCO	Method of Payment	Description	HQ Status	TBPOC Status	CCO Status	Current Estimate/ Actual Cost	Change from June 09 Approved Budget
1 S2	FA	Flagging & Traffic Control	N/A	N/A	Executed 12/5/07	\$200,000	
1S3	FA	Flagging & Traffic Control	N/A	N/A	Executed 7/2/08	\$300,000	
1S4	FA/LS	Flagging & Traffic Control	N/A	N/A	Executed 7/9/09	(\$57,580)	(\$57,580)
1S5	FA	Flagging & Traffic Control	I&A 2/16/10	N/A	Executed 2/23/10	\$250,000	\$250,000
1S6	FA	Flagging & Traffic Control	In Progress	In Progress	In Progress	\$500,000	\$500,000
8S1	FA	Add Funds for SWPPP Maint Sharing	N/A	N/A	12/14/09	\$25,000	\$25,000
11S1	FA	Add Funds for Utility Potholing	N/A	N/A	12/14/09	\$25,000	\$25,000
13S1	FA	PMIV Additional Funds	I&A 3/10/08	N/A	Executed 3/17/08	\$300,000	
13S2	FA	PMIV Additional Funds	In Progress	In Progress	In Progress	\$100,000	\$100,000
22 S1	FA	Additional Funds Maintain Stairway Access	N/A	N/A	Executed 11/13/08	\$25,000	\$25,000
22 S2	FA	Additional Funds Maintain Stairway Access	N/A	N/A	In Progress	\$60,000	\$60,000
39S1	FA	Additional Funds for Shuttle Service to USCG	I&A 3/18/09	N/A	Executed 3/30/2009	\$500,000	\$200,000
39S2	FA	Additional Funds for Shuttle Service to USCG		N/A	Executed 2/22/10	\$200,000	
45 S1	LS	Additional SWPPP	I&A 12/14/07	N/A	Executed 1/31/08	\$350,000	
51	LS	NOPC 12 & 13 Resolution	N/A	N/A	Executed 8/17/06	\$25,234	
52	0	Elimination of Contractor's Design of Tie-Ins	I&A 1/19/07	N/A	Executed 3/2/07	\$0	
53	FA	Handling and Storage of Material	I&A 11/06/06	N/A	Executed 12/8/06	\$240,000	

**Yerba Buena Island Detour, Contract No. 04-0120R4**  
**Contract Change Order Implementation Strategy**  
**June 28, 2010**

**DRAFT**

56	LS	Contractor's Design additional cost... Resolved NOPCs 2,3,4,8,9,10,11,14, and 16	I&A 2/20/08	Approved 3/5/08	Executed 3/17/08	\$6,837,310	
57	LS	Demolition of Building 206	N/A	N/A	Executed 10/18/06	\$22,378	
57S1	LS	Remove and Clear Building 254	N/A	N/A	Executed 6/4/07	\$10,572	
66S1	FA	Video/Photo Documentation Services Supplemental Funds	N/A	N/A	Executed 4/14/08	\$200,000	
66S2	FA	Video/Photo Documentation Services Supplemental Funds	I&A 9/17/09	N/A	Executed 9/22/09	\$200,000	
86	LS	Additional Suspension Costs	N/A	N/A	Executed 5/19/08	\$42,764	
91	LS	Contract Days Extension/TRO Compensation to November 08	RPP 8/28/07	TBD	Executed 10/31/07	\$1,818,948	
91 S1	LS	Base Contract TRO Extension to September 1, 2009	I&A 10/25/07	Approved 10/30/07	Executed 11/16/07	\$8,463,159	
91 S2	LS	Base Contract TRO Extension to December 10, 2010	I&A 9/2/09	Approved 7/15/09	Executed 10/08/09	\$5,494,737	
114		Global TRO Audit	N/A	N/A	Executed 1/20/10	\$30,000	
114 S1		<b>Global TRO Adjustment</b>		<b>TBD</b>	<b>In Progress</b>	<b>\$6,475,263</b>	
96	FA	SWPPP Steep Slope Stabilization Measures	N/A	N/A	Executed 1/4/08	\$190,000	
96S1	FA	Add Funds Shotcrete Slope at Bent 48	N/A	N/A	Executed 7/2/08	\$40,000	
96S2	FA	Add Funds Shotcrete Slope at Bent 48	N/A	N/A	Executed 9/17/09	\$100,000	\$100,000
109	FA	MEP Coordination	N/A	N/A	Executed 1/30/08	\$100,000	
110	FA	Geotech. Exploration Pads and Support	N/A	N/A	Executed 2/20/08	\$150,000	
119	FA/LS/ID/ UP	Project Wide SWPPP	I&A 4/07/08	N/A	Executed 4/17/08	\$638,939	
119S1	FA	Project Wide SWPPP (Additional Funds)	I&A 9/2/09	N/A	Executed 9/3/09	\$300,000	\$300,000
119S2	FA	Project Wide SWPPP (Additional Funds)	I&A 12/17/09	Approved 12/5/09	Executed 12/21/09	\$850,000	\$850,000
119S3	FA	Project Wide SWPPP (Additional Funds)	I&A 05/05/10	Approved 05/06/10	Executed 05/20/10	\$600,000	\$600,000
123	FA	Treasure Island Yard Lot Rental	I&A 4/16/08	N/A	Executed 4/17/08	\$600,000	\$350,000
123S1	FA	Additional Funds for Treasure Island Yard Lot Rental	I&A 10/8/09	N/A	Executed 10/26/09	\$350,000	
125	FA	Project Access Paving	N/A	N/A	Executed 4/04/08	\$150,000	\$150,000
125S1	FA	Additional Funds, Project Access Paving	I&A 6/12/08	N/A	Executed 6/25/08	\$35,000	
125S2	FA	Additional Funds, Project Access Paving	I&A 4/20/09	N/A	Executed 4/23/09	\$100,000	
125S3	FA	Additional Funds, Project Access Paving	I&A 9/17/09	N/A	Executed 9/22/09	\$50,000	
130	LS	Project Retention	I&A 4/07/08	N/A	Executed 4/14/08	\$136,510	
131	FA	Delete Permanent Erosion Control Items	N/A	N/A	Executed 5/6/09	(\$74,502)	
132	LS	Storm Damage Slope Repair (Resolved NOPC 17)	N/A	N/A	Executed 5/23/08	\$23,870	
139	-	Revised ESA's	N/A	N/A	Executed 5/23/08	\$0	
142	FA	Macalla Road Sinkhole Repair	N/A	N/A	Executed 7/18/08	\$150,000	
146	FA	Macalla Road Tree Trimming	N/A	N/A	Executed 7/21/08	\$50,000	\$280,000
146S1	FA	Add Funds Macalla Road Tree Trimming	N/A	N/A	Executed 11/25/08	\$50,000	
146S2	FA	Add Funds Macalla Road Tree Trimming	N/A	N/A	Executed 2/16/10	\$80,000	

**Yerba Buena Island Detour, Contract No. 04-0120R4**  
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146S3	FA	Add Funds Macalla Road Tree Trimming	N/A	N/A	Executed 05/20/10	\$100,000	
151	-	Public Safety Spec Change (Suspended Load)	N/A	N/A	Executed 9/23/08	\$0	
157	FA	USCG Access Mitigation Stairway Design to Quarters Above		N/A	Executed 1/28/09	\$150,000	
176	FA	Construction Staking	N/A	N/A	Executed 4/08/09	\$100,000	
182	FA	USCG use parking lots at WTI area Quarters 8		N/A	Executed 1/20/10	\$180,000	\$100,000
182S1	FA	USCG use parking lots at WTI area Quarters 8, additional parking and revised plans		N/A	Executed 2/26/10	\$220,000	
<b>182S2</b>	<b>FA/LS</b>	<b>USCG Quarters 8, Parking Lot Security and Lighting</b>			<b>In Progress</b>	<b>\$250,950</b>	<b>\$250,950</b>
<b>182S3</b>	<b>LS</b>	<b>USCG Quarters 8, Parking Lot Additional Lighting</b>			<b>In Progress</b>	<b>\$62,250</b>	<b>\$62,250</b>
183		Item Deletions (Items deleted on individual CCO's)				\$0	\$0
188	-	Sound Control Requirements, pile driving restrictions (Specification Only)	6/23/09	N/A	Executed 8/25/09	\$142,500	\$42,500
188S1	LS	Sound Control Impacts to W6 & W7 Pile Driving		N/A	Executed 4/1/10		
195	FA	USCG Stair Access to Quarters 9 along Goat Slope	7/31/09	N/A	Executed 8/25/09	\$500,000	\$150,000
195S1	FA	USCG Stairway additional funds		N/A	Executed 4/8/10	\$450,000	
203	LS	SSD Base Camera's	N/A	N/A	Executed 10/08/09	\$196,884	(\$503,116)
-	-	Permanent Gawk Screen on North Side Detour Rail – CCO Deleted				\$0	(\$200,000)
		Macalla Road Repairs (Costs not to be incurred)				\$0	(\$200,000)
224	FA	Treasure Island Material Storage Yard	I&A 9/17/09	N/A	Executed 10/08/09	\$400,000	\$400,000
228	FA	Added Call Boxes & SCADA	N/A	N/A	Executed 05/19/10	\$15,980	\$15,980
230	FA	USCG Shuttle for WB Onramp Closure	I&A 10/29/09	N/A	Executed 11/19/09	\$600,000	\$600,000
235	FA	Detour Traffic Improvements		N/A	Executed 2/8/10	\$300,000	\$850,000
235 S1	FA	Detour Traffic Improvements – Additional Funds		N/A	Executed 3/22/10	\$200,000	
235 S2	FA	Detour Traffic Improvements – Additional Funds		N/A	Executed 5/17/10	\$350,000	
237	LS	Temporary Trestle Extended Rental		N/A	Executed 4/14/10	\$267,510	\$267,510
239		Truck accident Clean up (11-9-09)		N/A	Executed 2/8/10	\$55,263	\$55,263
240	LS	Mainline Night Lane Closures	I&A 1/26/10	N/A	Executed 2/23/10	\$948,040	<b>\$2,030,360</b>
240S1	LS	Additional Night Lane Closures (To April, 10)	I&A 3/03/10	Approved 2/11/10	Executed 4/6/10	\$298,940	
240S2	LS	Additional Night Lane Closures (To June, 10)	I&A 4/15/10	Approved 04/01/10	Executed 5/17/10	\$491,680	
<b>240S3</b>	<b>LS</b>	<b>Additional Night Lane Closures (Post June 2010)</b>	<b>In Progress</b>	<b>Approved 05/06/10</b>	<b>In Progress</b>	<b>\$291,700</b>	
246	LS	Install Rumble Strips	N/A	N/A	Executed 5/19/2010	\$146,160	\$146,160
<b>246 S1</b>	<b>LS</b>	<b>Install Additional Rumble Strips</b>	<b>N/A</b>	<b>N/A</b>	<b>In Progress</b>	<b>\$30,380</b>	<b>\$30,380</b>
247	LS	Install Vehicle Detection Stations		N/A	Executed 5/19/2010	\$338,570	\$338,570
250	FA	USCG Fence on Goat Slope	N/A	N/A	Executed 5/19/2010	\$180,000	\$180,000
		<u>Indirect Contract Costs</u>					
		<b>COZEEP (\$1,300,000 Budgeted)</b>		<b>N/A</b>	<b>In Progress</b>	<b>\$3,037,000</b>	<b>\$1,737,000</b>

**Yerba Buena Island Detour, Contract No. 04-0120R4**  
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		State Furnished Materials & Services (Approx. Balance above \$400,000 budgeted under Baseline) (Est. Total Cost = \$700,000)		N/A	In Progress	\$300,000	\$300,000
		PIO Office Labor Day Outreach		N/A	In Progress	\$0	(\$200,000)
Current Status for Administrative and General CCOs						\$47,911,859	\$10,111,677

Budget Status

As of June 2009 the revised additional cost estimate for Time Related Overhead, escalation issues, and job wide changes is \$37.8M with the largest estimated cost being attributed to a global TRO adjustment. As Contract Change Orders for these items are negotiated, this estimate will be updated. Costs related to settlement of NOPC issues not captured here will be paid out of the contract contingency.

Total CCOs executed to date are \$36.8M.



## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee  
(TBPOC)

**DATE:** July 8, 2010

**FR:** Dina Noel, Assistant Deputy Director Toll Bridge Program, CTC

**RE:** Agenda No. - 2b2

Item- Contract Change Orders (CCOs)

Self Anchored Suspension (SAS) Contract: CCO #139 – Partial for  
Mitigation Opportunities of East End Fabrication Strategy

**Recommendation:**

**APPROVAL**

**Cost:**

CCO #139: \$17,402,364.16

**Schedule Impacts:**

Sets the stage to achieve seismic safety opening by December 2013.

**Discussion:**

**CCO #139 in the amount not to exceed \$17,000,000** was approved at the May 6, 2010 TBPOC meeting. **Today, the final approval request is for a total of \$17,402,364.16.** The additional \$402,364.16 will cover labor incentive costs aimed at expediting fabrication of various east end OBG components for lifts 13 and 14. The following table compares the requested not-to-exceed amounts for all the items in CCO #139 as presented in May with this request:

		May 6, 2010	July 13, 2010
1.	ZPMC shop drawing translators and fabrication resources	\$ 381,704.00	\$ 381,704.00
2.	Additional Jigs for fabrication:	\$ 2,058,210.00	\$ 2,058,210.00
3.	Mobilize steel detailers team to ZPMC & <u>Pier 7</u>	\$ 500,000.00	\$ 800,000.00
4.	Additional shop space (not to exceed six months) & <u>Labor</u>	\$13,800,000.00	\$14,006,504.16
5.	Miscellaneous (dehumidifiers, compressors, tools, etc)	\$ 212,000.00	\$ 155,946.00
	<b>Total</b>	<b>\$17,000,000.00</b>	<b>\$17,402,364.16</b>

The labor incentive dates per component are as follows:

Component	Completion Date
Floor beams & Longitudinal Diaphragms	November 25, 2010
Anchorage Plate	December 05, 2010
Bottom, Side, Vertical, and K Plates	December 15, 2010
Deck Panels including Super Panels	December 20, 2010

The engineering complexities of the east end OBGs with its intricate geometry and structural elements were first realized during the shop drawing development process. CCO #139 aims at mitigating further east end fabrication delays. As such, items 1 through 3 were discussed and conceptually approved by the TBPOC at their March 4, 2010 meeting. Subsequently, at the April 1, 2010 TBPOC meeting, the TBPOC discussed and authorized construction staff to negotiate resolution of item 4. Providing miscellaneous items like dehumidifiers to expedite painting, compressors, tools, and impact guns also fit into the overall delay mitigation strategy and for that reason item 5 has been incorporated into this CCO.

Attachment(s):

1. Draft CCO #139
2. Draft CCO Memorandum: 139

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

## CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO: 139 Suppl. No. 0 Contract No. 04 - 0120F4 Road SF-80-13.2/13.9 FED. AID LOC.:

To: AMERICAN BRIDGE/FLUOR ENTERPRISES INC A JOINT VENTURE

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the Engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

This change order provides the additional Items 1 through 6, to mitigate steel fabrication delays by accelerating the work at Shanghai Zhenhua Heavy Industry Co., Ltd. (ZPMC):

1. Additional Fabricator's Engineering and Technical Resources
2. Dehumidifiers to Expedite Painting
3. Additional Jigs for Fabrication
4. Additional Shop Space and Labor for OBG Fabrication
5. Mobilizing Detailers to Fabrication Facility & Oakland
6. Furnish Impact Guns, Compressors and Tools

### Extra Work at Agreed Lump Sum Price:

#### Item 1 - Additional Fabricator's Engineering and Technical Resources

Provide additional engineering services, detailers, translators and technical resources at the Contractor's fabrication facility (ZPMC), to expedite shop drawing translation, fabrication procedures, shop drawing conformance with fabrication procedures, fabrication planning and other technical reviews, thereby advancing fabrication of the East End OBG.

Additional Engineering and Technical Resources at Agreed Lump Sum..... \$ 381,704.00

#### Item 2 - Dehumidifiers to Expedite Painting

Furnish two additional portable dehumidifier units as directed by the Engineer to be employed during component painting operations thus extending the available painting work windows. The cost of the two additional portable dehumidification units will be borne equally by the Contractor and the Department.

Departments Share of Agreed Lump Sum Price: ..... \$ 55,946.00

Total Estimate of Extra Work at Agreed Lump Sum (Items 1 and 2)..... \$ 437,650.00

This sum constitutes full compensation, including markups, for the changes ordered in Items 1 and 2.

### Extra Work at Agreed Unit Price:

#### Item 3 - Additional Jigs for Fabrication

Furnish, install and remove additional jigs for the fabrication of the East End OBG including, but not limited to, additional jigs for floor beam and deck panel fabrication in the shop space added under Item 4 of this change order. For this work, the contractor will be paid \$3,742.20 per metric ton. This amount constitutes full compensation, including all markups, for the work of this change.

For payment purposes, the weight of additional jigs will be determined by identifying the additional jigs in place by means of a field quantity survey of additional jigs in place, converted to weight, using established unit weights of varies steel components, as determined by the Engineer. The total payment for additional jigs shall not exceed 550 metric tons.

Estimated Extra Work at Agreed Unit Price: 550 Metric Tons @ \$3,742.20/Metric ton..... \$ 2,058,210.00

## Adjustment of Compensation at Lump Sum:

### Item 4 – Additional Shop Space and Labor

Provide additional shop space and labor incentive to expedite completion of the various components of the East End OBG (Lifts 13 and 14), listed below:

<u>Component</u>	<u>Completion Date</u>
Floor Beams and Longitudinal Diaphragms	November 25, 2010
Anchorage Plate	December 05, 2010
Bottom, Side, Vertical, and K Plates	December 15, 2010
Deck Panels including Super Panels	December 20, 2010

### Item 4a – Provide Additional Shop Space

Provide additional fully furnished shop space inclusive of all equipment and power necessary to expedite the fabrication of the various components of the East End OBG (Lifts 13 and 14)

The Contractor agrees to accept the lump sum of \$13,570,956.96 as full compensation for any and all costs involved in providing the additional shop space in order to expedite the fabrication of the various components listed above.

As part of this agreement, the aforementioned lump sum shall include full compensation for all costs and impacts to other ZPMC fabrication work in providing priority access to the deck panel fabrication equipment in Work Shop 9.

Adjustment of Compensation At Agreed Lump Sum ..... \$13,570,956.96

### Item 4b – Additional Labor

Mobilize additional labor in order to complete the fabrication of the East End OBG (Lifts 13 and 14) components in accordance with the completion dates listed above as necessary to permit the assembly of Lifts 13 and 14.

The lump sum price for providing the additional labor is \$435,547.20. This lump sum price is full compensation for all additional labor, including all overtime, extra work shifts, night work shifts, weekend work shifts, and holiday work shifts as are necessary to complete the fabrication of the East End OBG (Lifts 13 and 14) components before the completion dates listed herein. The lump sum price also includes all surcharges, taxes, markups, profit, and adverse impacts to fabricator's productivity and efficiency that are brought about by this change order.

Adjustment of Compensation at Agreed Lump Sum ..... \$435,547.20

Total Adjustment of Compensation at Agreed Lump Sum (Items 4a and 4b)..... \$14,006,504.16

### Item 4c – Fabrication Incentive:

In the event the East End OBG (Lifts 13 and 14) components are completed on or before the completion dates listed above the Contractor shall earn the incentive amounts outlined below. All incentive payments will be paid on a subsequent supplemental contract change order:

Incentive amounts can be earned as follows:

- Floor Beams and Longitudinal Diaphragms: If this work is completed on or before November 25, 2010, Contractor will receive an incentive payment in the amount of \$674,520.00. For each and every day after November 25, 2010, until such time as the work is complete, the incentive amount, \$674,520.00, will be reduced \$16,863.00 per day until the total incentive amount to be earned by the contractor reaches a \$0 balance.
- Anchorage Plate: If this work is completed on or before December 5, 2010, Contractor will receive an incentive payment in the amount of \$72,270.00. For each and every day after December 5, 2010, until such time as the work is complete, the incentive amount, \$72,270.00, will be reduced \$2,676.67 per day until the incentive amount to be earned by the Contractor reaches a \$0 balance.

- Bottom, Side, Vertical, and K Plates: If this work is completed on or before December 15, 2010, Contractor will receive an incentive payment in the amount of \$573,342.00. For each and every day after December 15, 2010, until such time as the work is complete, the incentive amount, \$573,342.00, will be reduced \$5,972.31 per day until the incentive amount to be earned by the Contractor reaches a \$0 balance.
- Deck Panels including Super Panels: If this work is completed on or before December 20, 2010, the Contractor will receive an incentive payment in the amount of \$422,056.80. For each and every day after December 20, 2010, until such time as the work is complete, the incentive amount, \$422,056.80, will be reduced \$4,689.52 per day until the incentive amount to be earned by the Contractor reaches a \$0 balance

#### **Extra Work at Force Account:**

##### **Item 5 – Mobilize Detailers to Fabrication Facility & Oakland**

As directed by the Engineer, in support of expediting East End OBG shop drawing review and fabrication efforts, Contractor shall furnish structural steel detailers in Shanghai, China, and in Oakland California. Compensation for the provision of the structural steel detailers in Shanghai, China, and in Oakland California shall be compensated as extra work at force account in the same manner as provided by Contractor in Candraft-Tensor LLC Change Order 89 (sheets 5 & 6 of this change order), plus applicable markup.

In addition to the structural steel detailers in Shanghai, China, and in Oakland California already provided by Contractor, should the Engineer require additional structural steel detailers to provide services similar to those provided in Item 5, compensation will be paid Contractor through this Change Order in the same manner as provided in the preceding paragraph

Estimate of Extra Work at Force Account (Item 5): ..... \$800,000.00

##### **Item 6 – Furnish Impact Guns, Compressors and Tools**

As directed by the Engineer, Contractor shall furnish Impact Guns, Compressors and Tools to expedite structural steel bolt installation to facilitate East End OBG fabrication.

Estimate of Extra Work at Force Account (Item 6): ..... \$100,000.00

Total Estimate of Extra Work at Force Account (Items 5 and 6)..... \$900,000.00

Labor, equipment and material authorized by the Engineer, as necessary for Items 5 and 6, will be paid in accordance with the provisions of Section 4-1.03D, "Extra Work" of the Standard Specifications and Section 5-1.24, "Force Account Payment" of the Special Provisions.

#### **Summary of Estimate of Extra Work:**

Item 1 – Additional Fabricator's Engineering and Technical Resources	\$ 381,704.00
Item 2 – Dehumidifiers to Expedite Painting	\$ 55,946.00
Item 3 – Additional Jigs for Fabrication	\$ 2,058,210.00
Item 4 – Furnish Additional Shop Space & Labor	\$14,006,504.16
Item 5 – Mobilize Detailers to Fabrication Facility & Oakland	\$ 800,000.00
Item 6 – Furnish Impact Guns, Compressors and Tools	<u>\$ 100,000.00</u>
Total Estimated Extra Work for this Change Order	\$17,402,364.16

It is understood and agreed that the issuance of the change order in no way whatsoever is an acknowledgement of liability by the Department for past East End OBG delays. It is further understood the above delay mitigation measures will be executed without delaying OBG Lift 13 and 14 shipping dates and will not increase the project's critical path. The

# DRAFT

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Contractor shall notify the Engineer immediately if the work directed herein will in any way delay completion of planned fabrication activities.

Consideration of a time adjustment will be deferred until completion of the work specified herein. Determination of a commensurate time adjustment will be made in accordance with Section 10-1.13, "PROGRESS SCHEDULE (CRITICAL PATH METHOD)" and Section 10-1.14, "TIME-RELATED OVERHEAD" of the Special Provisions, as well as Section 8-1.07, "LIQUIDATED DAMAGES", of the Standard Specifications.

It is the intent of this CCO to provide schedule mitigation resources to facilitate the efficient and timely manufacture of OBG lifts 13 and 14 and create an opportunity for shipments of OBG Lifts 13 and 14 beginning July 2011.

Estimated Cost: Increase ☐ Decrease ☒ 17,402,364.16

By reason of this order the time of completion will be adjusted as follows: Deferred

Submitted by

Signature	Resident Engineer	Kannu Balan, Senior T.E.	Date
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Approval Recommended by

Signature	Supervising Bridge Engineer	Bill Casey, Actg Sup B.E.	Date
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Engineer Approval by

Signature	Principal Transportation Engineer	Peter Siegenthaler, Const Manager	Date
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We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by

Signature	(Print name and title)	Date
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# DRAFT

## CHANGE ORDER

Engineering Services Agreement

From: American Bridge/Fluor  
375 Burma Road  
Oakland, CA 94607

Change Order #: 89  
Date: February 22, 2010  
Job #: 660110

To: Candraft-Tensor LLC  
2060 South Patrick Drive  
Indian Harbor Beach, FL 32937

Engineering Services Agreement #: 660110-ESA-007  
Cost Code: 0188127  
G/L Code: 5200

Project: Owner Contract 04-0120F4/04-SF-80-13.2/13.9  
San Francisco Oakland Bay Bridge / East Span Seismic Retrofit Project / Self-Anchored Suspension Bridge

### Ref. Documents:

You are hereby authorized to make the following change in the above referenced Engineering Services Agreement for the above referenced Project, it being understood that all other terms and conditions of the Engineering Services Agreement shall remain unchanged.

**DESCRIPTION OF CHANGE:** Furnish Structural Steel Detailers in Oakland, California and Shanghai, China.

Item	Work Scope	Quantity (Estimate)	Unit of Measure	Unit Price	Amount
1	Furnish Structural Steel Detailers in Shanghai, China (SSDC's)	1980	Hour	\$105.00	\$207,900.00
2	Travel Time (SSDC's)	10	Round Trip	\$1,440.00	\$14,400.00
3	Per Diem for SSDC's	300	Man-Day	\$75.00	\$22,500.00
4	Furnish Structural Steel Detailer in Oakland, CA (SSDO)	80	Hour	\$105.00	\$8,400.00
5	Travel Time (SSDO)	1	Round Trip	\$360.00	\$360.00
6	Per Diem for SSDO	14	Man-Day	\$60.00	\$840.00
7	Travel Expenses (Not-to-Exceed)			See Below	\$15,000.00
	Total Not-to-Exceed (NTE)				\$269,400.00

### Clarifications:

For the SSDC's:

1. CTLLC shall furnish two SSDC's for 110 working days each.
2. SSDC's shall work Monday through Friday on the Changxing Island worksite in Shanghai from 7:00 a.m. to 5:00 p.m., the Standard Work Period in China. ABF shall pay CTLLC for actual hours the SSDC's work. SSDC's shall perform at least eight hours of billable work each day while on the Island. Lunch breaks are not billable. In addition to the hours worked, ABF shall pay one hour of travel time to each SSDC for travel to/from Changxing Island irrespective of actual travel time.
3. SSDC's shall be compensated for travel time to/from China as follows: ABF shall pay eight hours for each direction of travel, or 16 hours round trip, irrespective of the actual travel time. Travel Time shall be paid at \$90.00 per hour.
4. ABF shall furnish reasonable accommodations to SSDC's while working in China.
5. ABF shall furnish SSDC's round trip, economy class airfare between Vancouver, British Columbia and Shanghai, China.
6. ABF shall furnish local ground transportation for SSDC's to/from Changxing Island.
7. ABF shall reimburse CTLLC at actual cost plus five (5) percent mark-up for miscellaneous Travel Expenses to/from China; e.g. transportation to/from the airport and reasonable in-transit meals.
8. Work for the SSDC's shall commence on or about March 22, 2010.
9. ABF shall pay a per diem to each SSDC, which covers meals and all incidentals while in China (including weekends).
10. CTLLC shall procure Chinese visas. Valid Passports shall be CTLLC's responsibility.

# DRAFT

## CHANGE ORDER

Engineering Services Agreement

From: American Bridge/Fluor  
375 Burma Road  
Oakland, CA 94607

Change Order #: 89  
Date: February 22, 2010  
Job #: 660110

To: Candraft-Tensor LLC  
2060 South Patrick Drive  
Indian Harbor Beach, FL 32937

Engineering Services Agreement #: 660110-ESA-007  
Cost Code: 0188127  
G/L Code: 5200

Project: Owner Contract 04-0120F4/04-SF-80-13.2/13.9  
San Francisco Oakland Bay Bridge / East Span Seismic Retrofit Project / Self-Anchored Suspension Bridge

For the SSDO:

1. CTLLC shall furnish one SSDO for 10 working days.
2. The SSDO shall work Monday through Friday from 8:00 a.m. to 5:00 p.m. ABF shall pay CTLLC eight hours of billable work each day. Lunch breaks and local commute travel to/from the Contractor's office are not billable.
3. The SSDO shall be compensated for travel time to/from Oakland as follows: ABF shall pay two hours for each direction of travel irrespective of the actual travel time. Travel Time shall be paid at \$90.00 per hour.
4. ABF shall reimburse CTLLC at actual cost plus five (5) percent mark-up for Travel Expenses: e.g. round trip economy class airfare between Vancouver, British Columbia and Oakland, CA, and local transportation.
5. Work for the SSDO shall commence on or about February 15, 2010.
6. ABF shall pay a per diem to the SSDO, which covers meals and all incidentals while in Oakland (including weekends).
7. ABF shall procure a U.S. visa, if necessary, on behalf of CTLLC. Valid Passports shall be CTLLC's responsibility.

As Caltrans will identify Prime Contract Change Orders for the Extra Work covered herein, please reference Condition Number 4 of the General Provisions of the Agreement, which describes the conditions that must be adhered to regarding Changes that involve Caltrans.

Work paid on a time-and-material basis. CTLLC shall furnish on a weekly basis, timesheets to justify charges for resources expended on this Change. If CTLLC expends 90% of the Not-to-Exceed amount above, CTLLC shall make written request for additional funds.

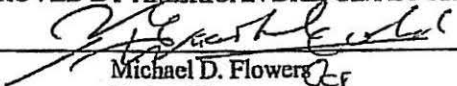
If work is to be done on unit price basis, quantities shown are approximate and payment will be made for actual quantities as determined under the Prime Contract.

Estimated Start Date:	N/A to this CO	Price This Change:	\$ 269,400.00
Estimated Completion Date:	Not Determined	Original Price:	\$ 10,037,000.00
Increase (Decrease) in Contract Time:	Not Determined	Total Previous Change Orders:	\$ 15,611,353.14
		Revised Total Price:	\$ 25,917,753.14

Originated by: Sam Choy, Contracts Manager


CTLLC accepts all terms and conditions for this change order and waives the right to any additional claims for extra compensation or schedule changes not listed above which pertain to work covered by this change order. It is further understood and agreed by CTLLC that this adjustment constitutes full compensation for all costs and markup directly or indirectly attributable to or resulting from the change ordered, for all delays directly or indirectly related thereto or resulting therefrom, and for performance of the change within the time frame stated.

APPROVED BY AMERICAN BRIDGE/FLUOR

By   
Michael D. Flowers  
Project Director

Date 3/10/10

ACCEPTED BY CANDRAFT-TENSOR LLC

By   
Title Managing Member

Date 03/02/10

CTLLC shall sign and return four (4) originals for execution by American Bridge/Fluor. American Bridge/Fluor will return one (1) final executed original to CTLLC.



**CONTRACT CHANGE ORDER MEMORANDUM**

DATE: 8/04/2009

Page 1 of 2

**DRAFT**

DC-CEM-4903 (OLD HC-39 REV. 6/93) CT# 7541-3544-0

TO Pete Siegenthaler, Principal TE			FILE 04-0120F4	
FROM Gary Pursell, STE / Richard Morrow, SBE			04-SF-80-13.2/13.9	
CCO NO. <b>139</b>	SUPPLEMENT NO. <b>0</b>	CATEGORY CODE <b>CHPT</b>	CONTINGENCY BALANCE (including this change) <b>\$80,869,899.40</b>	
<b>\$17,402,364.16</b>			HEADQUARTERS APPROVAL REQUIRED? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	
INCREASE <input checked="" type="checkbox"/> DECREASE <input type="checkbox"/>				
SUPPLEMENTAL FUNDS PROVIDED \$ 0.00			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	
CCO DESCRIPTION: Welder Training			PROJECT DESCRIPTION CONSTRUCT SELF-ANCHORED SUSPENSION BRIDGE	
Original Contract Time <b>2490 Day(s)</b>	Time Adj.: This Change <b>0 Day(s)</b>	Previously Approved CCO Time Adjustments <b>227 Day(s)</b>	Percentage Time Adjusted: (Including this change) <b>9%</b>	Total # of Unreconciled Deferred Time CCO(s): (including this change) <b>6</b>

**THIS CHANGE ORDER PROVIDES FOR:**

The following fabrication delay mitigation measures:

1. Additional Fabricator's Engineering and Technical Resources
2. Dehumidifiers to Expedite Painting
3. Additional Jigs for Fabrication
4. Additional Shop Space and Labor for OBG Fabrication
5. Mobilizing Detailers to Fabrication Facility & Oakland
6. Furnish Impact Guns, Compressors and Tools

The complexity of the design of OBG lifts 13 and 14 (East End OBG), with its widely varying geometry and curvature in all three dimensions, the main cable anchorage system, bearings and shear key supports, and the hinge pipe beam connection to the Skyway, has presented design challenges and constructability issues to be resolved during the development and detailing of shop drawings. Consequently, delivery and approval of the East End OBG shop drawings and the commencement of fabrication has been delayed approximately one year.

In addition, the anticipated complex fabrication of the East End OBG has the potential to introduce further schedule risk; especially access and confinement for welding, inspection and testing in the vicinity of the cable anchorage system inside the deck sections. The critical access areas will require 1) detailed fabrication sequencing to ensure constructability of the work and 2) establishment of a testing protocol in conjunction with the step-by-step fabrication to ensure that adequate QC and QA work will be performed effectively and efficiently during the fabrication process. These additional procedures and protocols are being developed under CCO 127.

To aid in the recovery of schedule delays for the East End (Lift 13 and 14) fabrication and to minimize the risk of future fabrication delays, the Contractor and the Department, in collaboration with the Toll Bridge Program Oversight Committee (TBPOC), have outlined several delay mitigation measures, which have been presented to the TBPOC for consideration and approvals. The above referenced delay mitigation measures were approved by the TBPOC on May 6, 2010 for a not to exceed amount of \$17.0M which included extra shop space for an amount not to exceed of \$13.8M.

The total amount for this CCO is \$17.4M which includes an amount of \$14.0M for the additional shop space and additional labor mobilization cost. The incentive for achieving the target dates as outlined in this change order will be covered in a subsequent supplemental change order for a total not to exceed amount of \$1.7M. The total not to exceed amount for this CCO and the supplement will be \$19.2M.

Additional fabricator's engineering and technical resources will need to be provided to expedite translation, reviews and conformity of the shop production drawings for the East End OBGs. The additional dehumidifiers will improve the efficiency of painting operations and allow painting work to proceed during inclement weather conditions. Mobilization of Candraft - Tensor LLC. (CTLLC) detailers to the ZPMC facility in China and the ABF facility in Oakland will enhance the review response time, thereby expediting start up of fabrication and the rapid resolution of necessary changes. The CCO also sets aside additional shop space that was not originally planned for use in

**CONTRACT CHANGE ORDER MEMORANDUM****DRAFT**

DATE: 8/04/2009

Page 2 of 2

DC-CEM-4903 (OLD HC-39 REV. 6/93) CT# 7541-3544-0

the fabrication of lifts 13 and 14. This added shop space together with the mobilization of additional labor forces will allow the fabricator to increase production and thereby reduce the fabrication duration of the East End OBG. An additional incentive to meet certain fabrication completion dates of the East End OBGs components is included in this CCO. The fabrication incentives are outlined in the change order. Payment of the outlined incentives will be provided in subsequent supplemental change orders as the targeted completion dates are met. Additional jigs are necessary to support fabrication in the additional shop space, and impact tools and equipment will expedite bolting and fit up operations, thereby improving the delivery schedule to the project site.

It is anticipated these mitigation measures will reduce risk of further delays to the completion of the project, and recover and/or improve the schedule by mitigating past delays. The delay mitigation measures will be implemented prior to the start of applicable fabrication activities to assure successful early completion of the controlling activities involved. It is understood the mitigation measures will not adversely affect controlling operations.

Consideration of adjustment of contract time will be deferred until completion of fabrication work involved when actual overall schedule benefits are analyzed and agreed upon with the Contractor.

Final responsibility for shop drawing delays has not been determined or resolved. Therefore, the change order includes a disclaimer that issuance of this change order is not an acknowledgement of liability by the Department for past East End OBG delays.

This work is not covered by any contract items. Therefore, payment for this work will be financed from the contingency fund. A cost analysis is on file.

This change order received concurrences from Gary Pursell (Resident Engineer), Bill Casey (Actg Sup Bridge Engineer), Pete Siegenthaler (Principal Engineer), Ken Terpstra (Project Manager), Tony Anziano (Toll Bridge Manager) and Jon Tapping (SFOBB Project Risk Manager). Maintenance and Design concurrences are not required for this change.

This change order received approval from TBPOC on xxxxx, and an Issue and Approve from Headquarter Construction on xxxxx

CONCURRED BY:		ESTIMATE OF COST	
	DATE	THIS REQUEST	TOTAL TO DATE
CONSTRUCTION ENGINEER Res. Eng. Gary Pursell, Sup. TE	3/24/10		
SR. BRIDGE ENGINEER Bill Casey Actg Sup BE.	3/24/10		
FHWA REPRESENTATIVE			
PROJECT MANAGER Proj. Manager, Ken Terpstra	3/24/10		
OTHER (SPECIFY)			
Rich Foley (HQ Liaison)	6/29/10		
PCE, Peter Siegenthaler, Prin TE	3/24/10		
DISTRICT PRIOR APPROVAL BY			
HQ (ISSUE & APPROVE) (TO PROCEED) BY Larry Salhaney			
RESIDENT ENGINEER SIGNATURE			
		FEDERAL PARTICIPATION	
		<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input checked="" type="checkbox"/> NONE <input type="checkbox"/> NON-PARTICIPATING (MAINTENANCE) <input type="checkbox"/> NON-PARTICIPATING	
		FEDERAL SEGREGATION (IF MORE THAN ONE FUNDING SOURCE OR P.I.P. TYPE)	
		<input type="checkbox"/> CCO FUNDED PER CONTRACT <input type="checkbox"/> CCO FUNDED AS FOLLOWS	
		FEDERAL FUNDING SOURCE	PERCENT

## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** July 8, 2010

**FR:** Andrew Fremier, Deputy Director, BATA

**RE:** Agenda No. - 3a  
Progress Reports  
Item- Final June 2010 Project Progress and Financial Update

---

**Recommendation:**

For Information Only/**APPROVAL** Confirmation

**Cost:**

N/A

**Schedule Impacts:**

N/A

**Discussion:**

Included in this package is the Final June 2010 Project Progress and Financial Update, for TBPOC information. By meeting time, the PMT will have approved the report through TBPOC-delegated authority and requests confirmation of this approval. The report was issued on July 7, 2010.

**Attachment(s):**

Final June 2010 Project Progress and Financial Update (see end of binder)



# San Francisco Bay Area Toll Bridge Seismic Retrofit and Regional Measure 1 Programs

## Project Progress and Financial Update June 2010



**TOLL BRIDGE PROGRAM  
OVERSIGHT COMMITTEE**

CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

**Released: July 2010**



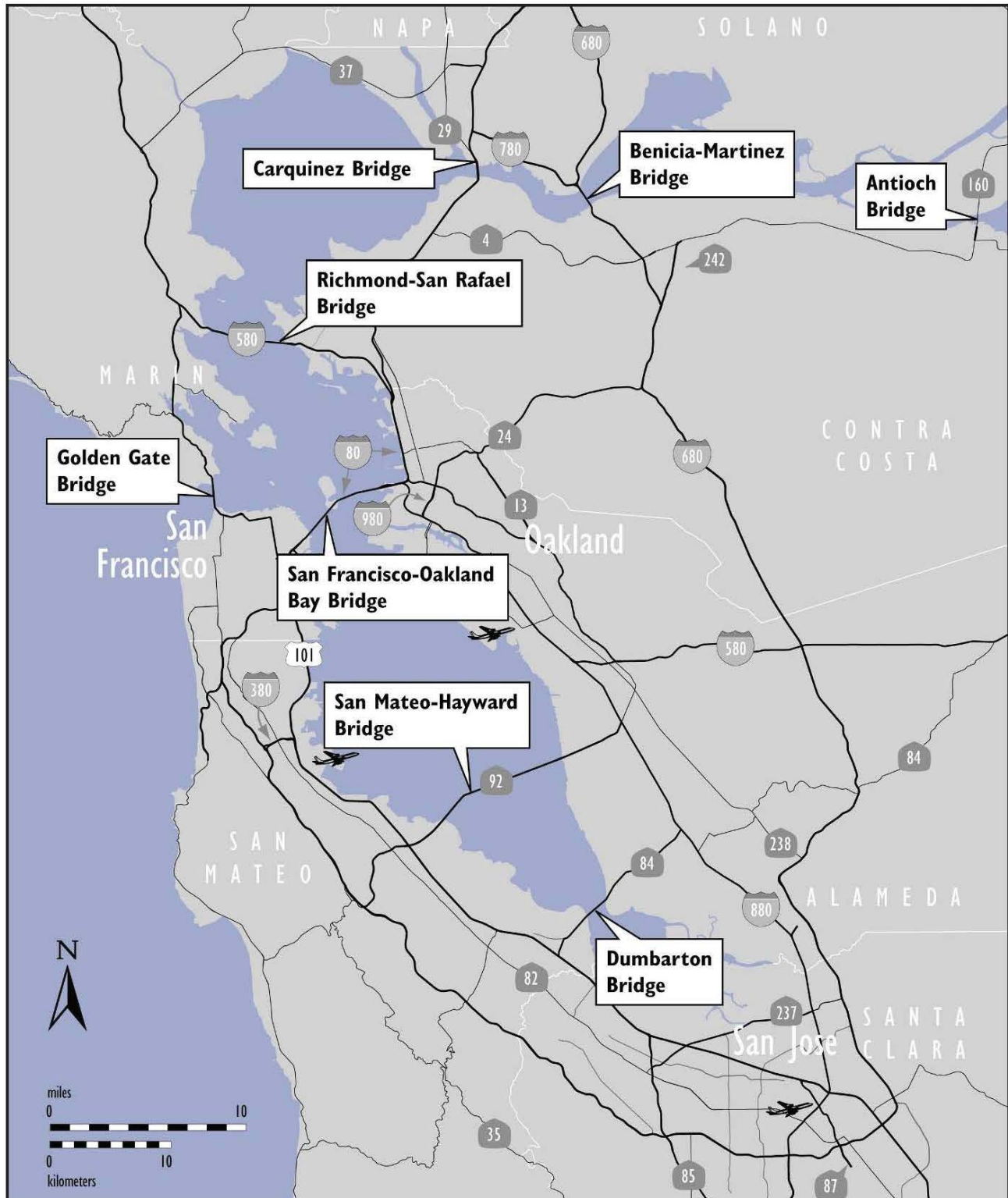
First Tower Boxes Being Loaded onto Transport Ship



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## Map of Bay Area Toll Bridges



\* The Golden Gate Bridge is owned and operated by the Golden Gate Bridge, Highway, and Transportation District.

## Introduction

In July 2005, Assembly Bill (AB) 144 (Hancock) created the Toll Bridge Program Oversight Committee (TBPOC) to implement a project oversight and project control process for the Benicia-Martinez Bridge and State Toll Bridge Seismic Retrofit Program projects. The TBPOC consists of the Caltrans Director, the Bay Area Toll Authority (BATA) Executive Director and the Executive Director of the California Transportation Commission (CTC). The TBPOC's project oversight and control processes include, but are not limited to, reviewing bid specifications and documents, providing field staff to review ongoing costs, reviewing and approving significant change orders and claims in excess of \$1 million (as defined by the Committee) and preparing project reports. AB 144 identified the Toll Bridge Seismic Retrofit Program (TBSRP) and the new Benicia-Martinez Bridge Project as being under the direct oversight of the TBPOC. In January 2010, Assembly Bill (AB) 1175 (Torlakson) amended the TBSRP to include the Antioch and Dumbarton seismic retrofit projects. The current Toll Bridge Seismic Retrofit Program is as follows:

Toll Bridge Seismic Retrofit Projects	Seismic Safety Status
Dumbarton Bridge Seismic Retrofit	Open
Antioch Bridge Seismic Retrofit	Construction
San Francisco-Oakland Bay Bridge East Span Replacement	Construction
San Francisco-Oakland Bay Bridge West Approach Replacement	Complete
San Francisco-Oakland Bay Bridge West Span Seismic Retrofit	Complete
San Mateo-Hayward Bridge Seismic Retrofit	Complete
Richmond-San Rafael Bridge Seismic Retrofit	Complete
1958 Carquinez Bridge Seismic Retrofit	Complete
1962 Benicia-Martinez Bridge Seismic Retrofit	Complete
San Diego-Coronado Bridge Seismic Retrofit	Complete
Vincent Thomas Bridge Seismic Retrofit	Complete

The new Benicia-Martinez Bridge is part of a larger program of toll-funded projects called the Regional Measure 1 (RM1) Toll Bridge Program under the responsibility of BATA and Caltrans. While the rest of the projects in the RM1 program are not directly under the responsibility of the TBPOC, BATA and Caltrans will continue to report on their progress as an informational item. The RM1 program includes:

Regional Measure 1 Projects	Open to Traffic Status
Interstate 880/State Route 92 Interchange Reconstruction	Construction
1962 Benicia-Martinez Bridge Reconstruction	Open
New Benicia-Martinez Bridge	Open
Richmond-San Rafael Bridge Deck Overlay Rehabilitation	Open
Richmond-San Rafael Bridge Trestle, Fender & Deck Joint Rehabilitation	Open
Westbound Carquinez Bridge Replacement	Open
San Mateo-Hayward Bridge Widening	Open
State Route 84 Bayfront Expressway Widening	Open
Richmond Parkway	Open



## SUMMARY OF MAJOR PROJECT HIGHLIGHTS, ISSUES, AND ACTIONS



First Tower Box Being Loaded for Shipment



SAS Shearleg Crane Placing Westbound Roadway Box 6



SAS Eastbound Roadway Boxes Erected on Temporary Support Structures

### Toll Bridge Seismic Retrofit Program Risk Management

A major element of the 2005 AB144, the law creating the TBPOC, was legislative direction to implement a more aggressive risk management program. Such a program has been implemented in stages over time to ensure development of a robust and comprehensive approach to risk management. A milestone has been reached in the risk management program with all elements now fully incorporated, resulting in one of the most detailed and comprehensive risk management programs in the country today.

A comprehensive risk assessment is performed for each project in the program. Based upon those assessments, a forecast is developed using the average cost of risk. These forecasts can both increase and decrease as risks are identified, resolved or retired. Nonetheless, assurances have been made that the public is informed of the risks that have been identified and the possible expense they could necessitate.

As of the end of the first quarter 2010, the 50 percent probable draw on program contingency is \$526 million with a potential draw that ranges from about \$300 million to \$700 million. The total current program contingency budget is \$948 million, which was recently increased by \$190 million with the inclusion of the Antioch Bridge and Dumbarton Bridge retrofits into the Toll Bridge Seismic Retrofit Program (TBSRP).

Given the current program contingency budget balance, there are sufficient funds to cover the cost of identified risks. Risk mitigation actions are continuously being developed and implemented to reduce the potential draw on the contingency.

### San Francisco-Oakland Bay Bridge (SFOBB) East Span Seismic Replacement Project SAS Superstructure Contract

The prime contractor constructing the Self-Anchored Suspension (SAS) Bridge from the completed Skyway to Yerba Buena Island is a joint venture of American Bridge/Fluor (ABF). Significant progress is being made both here in the Bay Area and around the world. The first 12 of 28 steel roadway boxes have arrived with 11 already having been lifted into place. These boxes, fabricated in Shanghai, China, join other bridge components that have been arriving from around the country and the world. Shipments of roadway



**SFO Bay Bridge Detour Structure Completed over the Labor Day Weekend**

and tower boxes will continue throughout the year. The first shipment of tower boxes is expected to arrive this summer. All bridge components undergo a rigorous quality review by the fabricator, ABF, and Caltrans to ensure that only bridge components that have been built in accordance to the specifications will be shipped.

The completion of the last roadway sections at the east end of the new span are on the critical path and the east end fabrication has been delayed due to the complexity of the work. The TBPOC is taking aggressive steps to mitigate the delay and accelerate the remaining work.

Caltrans has established risk management teams to identify and evaluate the challenges and future potential risks to completing the project on time and on budget. In particular, teams are reviewing cable-erection plans and mitigation actions. Based on the latest risk management assessment, there is a potential for a \$238 million increase on the SAS contract.

## Yerba Buena Island Detour Contract

The Yerba Buena Island Detour contractor, C.C. Myers, has rolled out the existing bridge span and rolled in the new east tie-in span of the detour structure that diverts traffic off the existing bridge to the detour structure that now ties into the Yerba Buena Island Tunnel. The traffic switch occurred as scheduled on Labor Day weekend. Work is now progressing on the demolition of the old approach span and construction of a number of accelerated foundations for the future transition structures from the Self-Anchored Suspension (SAS) bridge to the tunnel. Upon removal of the old approach span, the area will be turned over to the Yerba Buena Island Transition Structures (YBITS) #1 contractor that will construct the new approach structures.

## Yerba Buena Island Transition Structures #1 Contract

The YBITS#1 contract has been awarded to MCM Construction, the same contractor completing the Oakland Touchdown (OTD) #1 contract. Construction will not start until the demolition of the existing approach has been completed. Caltrans and the contractor are in the submittal and planning process for the contract.



## SUMMARY OF MAJOR PROJECT HIGHLIGHTS, ISSUES, AND ACTIONS



Oakland Touchdown #1 Bike Path and Hand Railing



Oakland Touchdown #1 Service Platforms Installed



Aerial View of Oakland Touchdown #1 looking East

### Oakland Touchdown #1 Contract

The Oakland Touchdown (OTD) #1 contractor, MCM Construction completed the work on June 8, 2010. The contract constructed the westbound approach from the toll plaza to the Skyway structure and the portion of the eastbound approach that is not in conflict with the existing bridge structure. The remaining approach work will be completed by a future OTD #2 contract.

### TBSRP Capital Outlay Support

Based on initial discussions with the contractors, early completion of the East Span Project was believed to be possible and sufficient to mitigate potential identified support cost increases. The support cost increases are primarily due to the need to re-advertise the SAS contract and to decisions made to increase opportunities for early completion of the East Span Project. These decisions include a 12-month schedule extension provided during bid time to attract the maximum number of bidders for the SAS contract and extension of the YBI Detour contract to advance future foundation and column work of the transition structure and west-end deck reconstruction. Since early completion and the intended cost savings are deemed to be unlikely, action was taken to transfer program contingency funds to cover the costs by the end of the second quarter of 2010. Opportunities to economize and reduce costs in this area will continue to be pursued.

### TBSRP Programmatic Risks

This category includes risks that are not yet scoped within existing contracts and/or that spread across multiple contracts. The interdependencies between all of the contracts in the program result in the potential for one contract's delay to impact the entire program that are accounted for in the net programmatic risks.



Dumbarton Bridge



Antioch Bridge



Site Preparation for New Route 92 and Interstate 880 Separator

## Dumbarton Bridge Sesimic Retrofit

When first conceived, the Toll Bridge Seismic Retrofit Program only identified seven of the nine state owned toll bridges to be in need of seismic retrofit, which excluded the Dumbarton and Antioch Bridges. Further seismic vulnerability studies completed by Caltrans and BATA on those structures determined that both structures were in need of retrofit based on current seismic standards.

On October 11, 2009, Governor Schwarzenegger signed Assembly Bill 1175, which added the Dumbarton and Antioch Bridges to the Toll Bridge Seismic Retrofit Program. In part to fund these seismic retrofits, a toll increase on the seven state-owned toll bridges in the Bay Area will go into effect on July 1, 2010. Bids for the Dumbarton Bridge Seismic Retrofit were opened on June 15, 2010. The lowest bids were substantively lower than the engineer's estimate. Caltrans is in the process of evaluating the bids to determine the lowest responsive bidder.

## Antioch Bridge Sesimic Retrofit

Bids for the Antioch Bridge Retrofit Contract were opened on March 10, 2010. The contract was awarded to California Engineering Contractors, Inc. on April 22, 2010. The awarded contract was significantly less than the engineer's estimate for the work and has resulted in a significant cost forecast reduction. The TBPOC is recommending that the budget for the project be reduced to account for the low bid. The original budget for the project was \$267 million. Because of the low bid, the TBPOC is forecasting a need of only \$130 million. The retrofit is forecast to be completed by May 2012.

## Regional Measure 1 Toll Bridge Program (RM1)

### Interstate 880/State Route 92 Interchange Reconstruction Project

On this interchange reconstruction project, the new eastbound State Route 92 to northbound Interstate 880 direct connector structure (ENCONN) was completed and opened to detour traffic on May 16, 2009, while the southern half of the new separation structure was opened in April 2010 to detour traffic. Work is now ongoing on the remaining northern half of the separation structure. The project is forecast to be substantially completed as planned in June 2011, pending weather or unforeseen construction delays.

## Toll Bridge Seismic Retrofit Program Cost Summary

	Contract Status	AB 144/SB 66 Budget (July 2005)	TBPOC Approved Changes	Current TBPOC Approved Budget (May 2010)	Cost to Date (May 2010)	Current Cost Forecast (May 2010)	Cost Variance	Cost Status
		a	b	c = a + b	d	e	f = e - c	
<b>SFOBB East Span Seismic Replacement</b>								
Capital Outlay Construction								
Skyway	Completed	1,293.0	(38.9)	1,254.1	1,236.9	1,254.1	-	●
SAS Marine Foundations	Completed	313.5	(32.6)	280.9	274.8	280.9	-	●
SAS Superstructure	Construction	1,753.7	-	1,753.7	1,021.3	1,991.4	237.7	●
YBI Detour	Construction	132.0	360.9	492.9	436.5	486.3	(6.6)	●
YBI Transition Structures (YBITS)		299.3	(93.0)	206.3	4.7	220.2	13.9	●
YBITS 1	Construction			144.0	4.7	156.9	12.9	●
YBITS 2	Design			59.0	-	60.0	1.0	●
YBITS Landscaping	Design			3.3	-	3.3	-	●
Oakland Touchdown (OTD)		283.8	4.2	288.0	207.5	283.0	(5.0)	●
OTD 1	Completed			212.0	199.6	211.2	(0.8)	●
OTD 2	Design			62.0	-	57.8	(4.2)	●
OTD Electrical Systems	Design			4.4	-	4.4	-	●
Submerged Electric Cable	Completed			9.6	7.9	9.6	-	●
Existing Bridge Demolition	Design	239.2	(0.1)	239.1	-	232.4	(6.7)	●
Stormwater Treatment Measures	Completed	15.0	3.3	18.3	16.7	18.3	-	●
Other Completed Contracts	Completed	90.3	-	90.3	89.2	90.3	-	●
Capital Outlay Support		959.3	-	959.3	846.1	1,262.2	302.9	●
Right-of-Way and Environmental Mitigation		72.4	-	72.4	51.2	72.4	-	●
Other Budgeted Capital		35.1	(3.3)	31.8	0.7	7.7	(24.1)	●
<b>Total SFOBB East Span Replacement</b>		<b>5,486.6</b>	<b>200.5</b>	<b>5,687.1</b>	<b>4,185.6</b>	<b>6,199.2</b>	<b>512.1</b>	
<b>Antioch Bridge Seismic Retrofit</b>								
Capital Outlay Construction and Mitigation	Construction	-	156.0	156.0	-	70.0	(86.0)	●
Capital Outlay Support		-	39.0	39.0	15.6	31.0	(8.0)	●
<b>Total Antioch Bridge Seismic Retrofit</b>		<b>-</b>	<b>195.0</b>	<b>195.0</b>	<b>15.6</b>	<b>101.0</b>	<b>(94.0)</b>	
<b>Dumbarton Bridge Seismic Retrofit</b>								
Capital Outlay Construction and Mitigation	Advertised	-	270.0	270.0	0.3	171.9	98.1	●
Capital Outlay Support		-	95.0	95.0	21.6	103.1	8.1	●
<b>Total Dumbarton Bridge Seismic Retrofit</b>		<b>-</b>	<b>365.0</b>	<b>365.0</b>	<b>21.9</b>	<b>275.0</b>	<b>(90.0)</b>	
Other Program Projects		2,268.4	(58.8)	2,209.6	2,158.2	2,192.6	(17.0)	●
Miscellaneous Program Costs		30.0	-	30.0	24.8	30.0	-	●
Net Programmatic Risks		-	-	-	-	78.0	78.0	●
Program Contingency		900.0	48.3	948.3	-	422.2	(526.1)	●
<b>Total Toll Bridge Seismic Retrofit Program</b>		<b>8,685.0</b>	<b>750.0</b>	<b>9,435.0</b>	<b>6,406.1</b>	<b>9,298.0</b>	<b>(137.0)</b>	●

- Within approved schedule and budget
- Identified potential project risks that could significantly impact approved schedules and budgets if not mitigated
- Known project impacts with forthcoming changes to approved schedules and budgets

## Toll Bridge Seismic Retrofit Program Schedule Summary

	AB144/SB 66 Project Completion Schedule Baseline (July 2005)	TBPOC Approved Changes (Months)	Current TBPOC Approved Completed Schedule (May 2010)	Current Completion Forecast (May 2010)	Schedule Variance (Months)	Schedule Status	Remarks/Notes
	g	h	i = g + h	j	k = j - i	l	
<b>SFOBB East Span Seismic Replacement</b>							
<b>Contract Completion</b>							
Skyway	Apr 2007	8	Dec 2007	Dec 2007	-	●	See Page 30
SAS Marine Foundations	Jun 2008	(5)	Jan 2008	Jan 2008	-	●	See Page 20
SAS Superstructure	Mar 2012	12	Mar 2013	Oct 2013	7	●	See Page 24
YBI Detour	Jul 2007	41	Dec 2010	Dec 2010	-	●	See Page 17
YBI Transition Structures (YBITS)	Nov 2013	12	Nov 2014	Mar 2015	4		See Page 18
YBITS 1			Sep 2013	Dec 2013	3	●	
YBITS 2			Nov 2014	Mar 2015	4	●	
YBITS Landscaping			TBD	TBD	-	●	
Oakland Touchdown	Nov 2013	12	Nov 2014	Mar 2015	4		See Page 31
OTD 1			May 2010	June 2010	1	●	
OTD 2			Nov 2014	Mar 2015	4	●	
OTD Electrical Systems			TBD	TBD	-	●	
Submerged Electric Cable			Jan 2008	Jan 2008	-	●	
Existing Bridge Demolition	Sep 2014	12	Sep 2015	Dec 2015	3	●	
Stormwater Treatment Measures	Mar 2008	-	Mar 2008	Mar 2008	-	●	
<b>SFOBB East Span Bridge Opening and Other Milestones</b>							
OTD Westbound Access			Aug 2009	Aug 2009	-	●	
YBI Detour Open			Sep 2009	Sep 2009	-	●	See Page 16
Westbound Open	Sep 2011	12	Sep 2012	April 2013	7	●	
Eastbound Open	Sep 2012	12	Sep 2013	Dec 2013	3	●	
<b>Antioch Bridge Seismic Retrofit</b>							
Contract Completion			Aug 2012	May 2012	(3)	●	See Page 34
<b>Dumbarton Bridge Seismic Retrofit</b>							
Contract Completion			Sep 2013	Sep 2013	-	●	See Page 35

Notes: 1) Figures may not sum up to totals due to rounding effects.

2) TBSRP Forecasts for the Monthly Reports are generally updated on a quarterly basis in conjunction with quarterly risk analysis assessments for the TBSRP Projects.



## Regional Measure 1 Program Cost Summary

	Contract Status	BATA Baseline Budget (July 2005)	BATA Approved Changes	Current BATA Approved Budget (May 2010)	Cost to Date (May 2009)	Current Cost Forecast (May 2010)	Cost Variance	Cost Status
		a	b	c = a + b	d	e	f = e - c	
<b>Interstate 880/Route 92 Interchange Reconstruction</b>								
Capital Outlay Construction	Construction	94.8	60.2	161.0	95.0	161.0	-	●
Capital Outlay Support		28.8	34.6	63.4	53.6	63.4	-	●
Capital Outlay Right-of-Way		9.9	7.0	16.9	12.3	16.9	-	●
Project Reserve		0.3	3.4	3.7	-	3.7	-	
<b>Total I-880/SR-92 Interchange Reconstruction</b>		<b>133.8</b>	<b>111.2</b>	<b>245.0</b>	<b>160.9</b>	<b>245.0</b>	<b>-</b>	
<b>Other Completed Program Projects</b>		<b>1,978.8</b>	<b>182.6</b>	<b>2,161.4</b>	<b>2,086.5</b>	<b>2,161.4</b>	<b>-</b>	
<b>Total Regional Measure 1 Toll Bridge Program</b>		<b>2,112.6</b>	<b>293.8</b>	<b>2,406.4</b>	<b>2,247.4</b>	<b>2,406.4</b>	<b>-</b>	

- Within approved schedule and budget
- Identified potential project risks that could significantly impact approved schedules and budgets if not mitigated
- Known project impacts with forthcoming changes to approved schedules and budgets

## Regional Measure 1 Program Schedule Summary

	BATA Baseline Completion Schedule (July 2005)	BATA Approved Changes (Months)	Current BATA Approved Completion Schedule (May 2010)	Current Completion Forecast (May 2010)	Schedule Variance (Months)	Schedule Status	Remarks/Notes
	g	h	i = g + h	j	k = j - i	l	
<a href="#">Interstate 880/Route 952 Interchange Reconstruction</a>							
Contract Completion							
Interchange Reconstruction	Dec 2010	6	Jun 2011	Jun 2011	-	●	See Page 40

Notes: 1) Figures may not sum up to totals due to rounding effects.







<Image Description

First Tower Boxes Being Transported to San Francisco Bay

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM



## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge Seismic Retrofit Strategy

When a 250-ton section of the upper deck of the East Span collapsed during the 7.1-magnitude Loma Prieta Earthquake in 1989, it was a wake-up call for the entire Bay Area. While the East Span quickly reopened within a month, critical questions lingered: How could the Bay Bridge—a vital regional lifeline structure—be strengthened to withstand the next major earthquake? Seismic experts from around the world determined that to make each separate element seismically safe on a bridge of this size, the work must be divided into numerous projects. Each project presents unique challenges. Yet there is one common challenge — the need to accommodate the more than 280,000 vehicles that cross the bridge each day.



West Approach Overview

#### West Approach Seismic Replacement Project

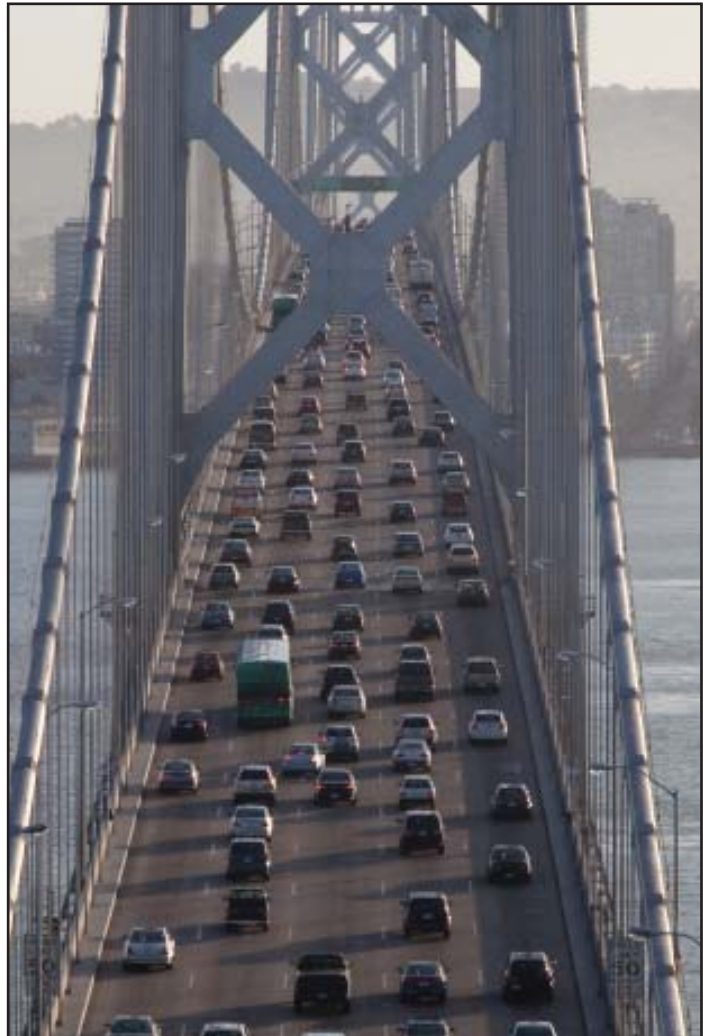
**Project Status: Completed 2009**

Seismic safety retrofit work on the West Approach in San Francisco—bounded on the west by 5th Street and on the east by the anchorage of the west span at Beale Street—involved completely removing and replacing this one-mile stretch of Interstate 80, as well as six on- and off-ramps within the confines of the West Approach's original footprint. This project was completed on April 8, 2009.

#### West Span Seismic Retrofit Project

**Project Status: Completed 2009**

The West Span lies between Yerba Buena Island and San Francisco and is made up of two complete suspension spans connected at a center anchorage. Retrofit work included adding massive amounts of steel and concrete to strengthen the entire West Span, along with new seismic shock absorbers and bracing.



San Francisco-Oakland Bay Bridge West Span

## East Span Seismic Replacement Project

Rather than a seismic retrofit, the two-mile long East Span is being completely rebuilt. When completed, the new East Span will consist of several different sections, but will appear as a single streamlined span. The eastbound and westbound lanes of the East Span will no longer include upper and lower decks. The lanes will instead be parallel, providing motorists with expansive views of the bay. These views will also be enjoyed by bicyclists and pedestrians, thanks to a new path on the south side of the bridge that will extend all the way to Yerba Buena Island. The new span will be aligned north of the existing bridge to allow traffic to continue to flow on the existing bridge as crews build the new span.

The new span will feature the world's longest Self-Anchored Suspension (SAS) bridge that will be connected to an elegant roadway supported by piers (Skyway), which will gradually slope down toward the Oakland shoreline (Oakland Touchdown). A new transition structure on Yerba Buena Island (YBI) will connect the SAS to the YBI Tunnel and will transition the East Span's side-by-side traffic to the upper and lower decks of the tunnel and West Span.

When construction of the new East Span is complete and vehicles have been safely rerouted to it, the original East Span will be demolished.



Architectural Rendering of the New East Span of the San Francisco-Oakland Bay Bridge





The Left Coast Lifter Lifting a Roadway Box

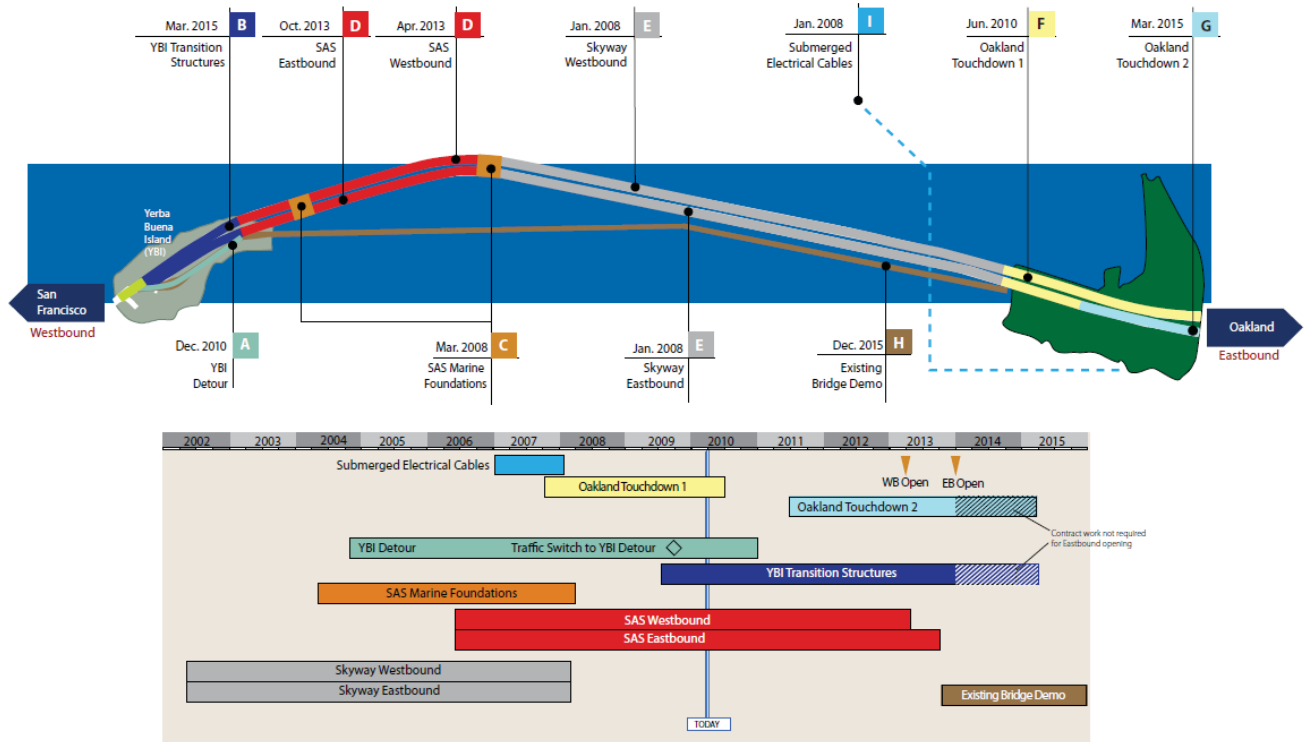
## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Summary

The new East Span bridge can be split into four major components—the Skyway and the Self-Anchored Suspension bridge in the middle and the Yerba Buena Island Transition Structures and Oakland Touchdown approaches at either end. Each component is being constructed by one to three separate contracts that all have been sequenced together.

Highlighted below are the major East Span contracts and their schedules. The letter designation before each contract corresponds to contract descriptions in the report.

#### SFOBB East Span Work Sequence



## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Yerba Buena Island Detour (YBID)

As with all of the Bay Bridge's seismic retrofit projects, crews must build the Yerba Buena Island Transition Structures (YBITS) without disrupting traffic. To accomplish this task, YBID eastbound and westbound traffic was shifted off the existing roadway and onto a temporary detour on Labor Day weekend 2009. Drivers will use this detour, just south of the original roadway, until traffic is moved onto the new East Span.

#### A YBID Contract

**Contractor:** C.C. Myers Inc

**Approved Capital Outlay Budget:** \$492.9 M

**Status:** 94% Complete as of May 2010

This contract was originally awarded in early 2004 to construct the detour structure for the planned 2006 opening of the new East Span. Due to the re-advertisement of the SAS superstructure contract in 2005 because of a lack of funding at the time, the bridge opening was rescheduled to 2013. To better integrate the contract into the current East Span schedule and to improve seismic safety and mitigate future construction risks, the TBPOC has approved a number of changes to the contract, including adding the deck replacement work near the tunnel that was rolled into place over Labor Day weekend 2007, advancing future transition structure foundation work and making design enhancements to the temporary detour structure. These changes have increased the budget and forecast for the contract to cover the revised project scope and potential project risks.



West Tie-In Phase #1 Rolled out on Labor Day 2007

#### ***Tunnel Approach Roadway Replacement***

The first in a series of activities to open the detour viaduct was completed in 2007 with the replacement of a 350-foot-long stretch of upper-deck roadway just east of the Yerba Buena Island Tunnel. During this historic milestone, the entire Bay Bridge was closed over the 2007 Labor Day weekend so crews could demolish and replace the old section of the deck with a seismically upgraded 6,500-ton precast section of viaduct that was literally pushed into place (see photo above).

**Status:** Completed.

#### ***Detour Viaduct Fabrication and Construction***

The "S-Curve" detour viaduct runs parallel to the alignment of the old approach structure from the tunnel to the cantilever spans of the East Span. The viaduct looks similar to the structure it is replacing with steel cross beams and girders and upper and lower concrete roadway decks.

The final 288-foot portion of the detour truss was rolled into place during a full bridge closure over Labor Day Weekend in 2009. Speed limits have been reduced on the viaduct to take the new alignment into account.



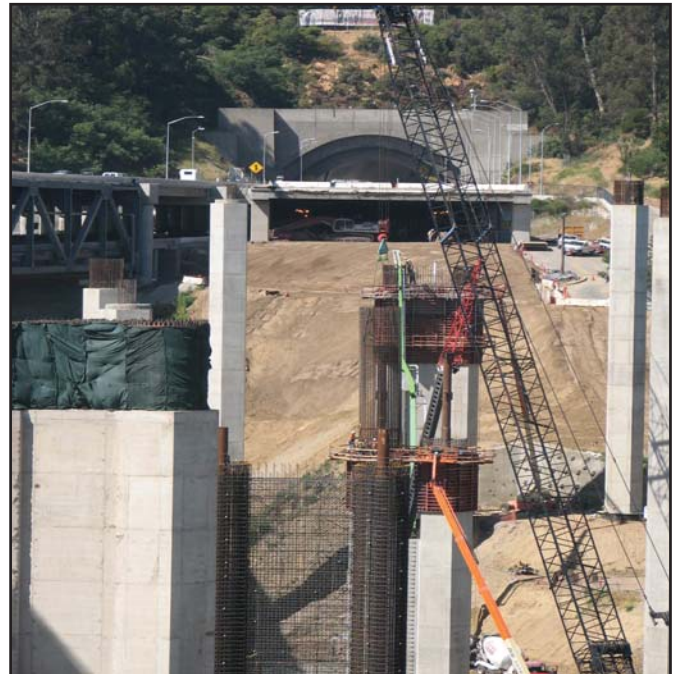


**Status:** Completed.

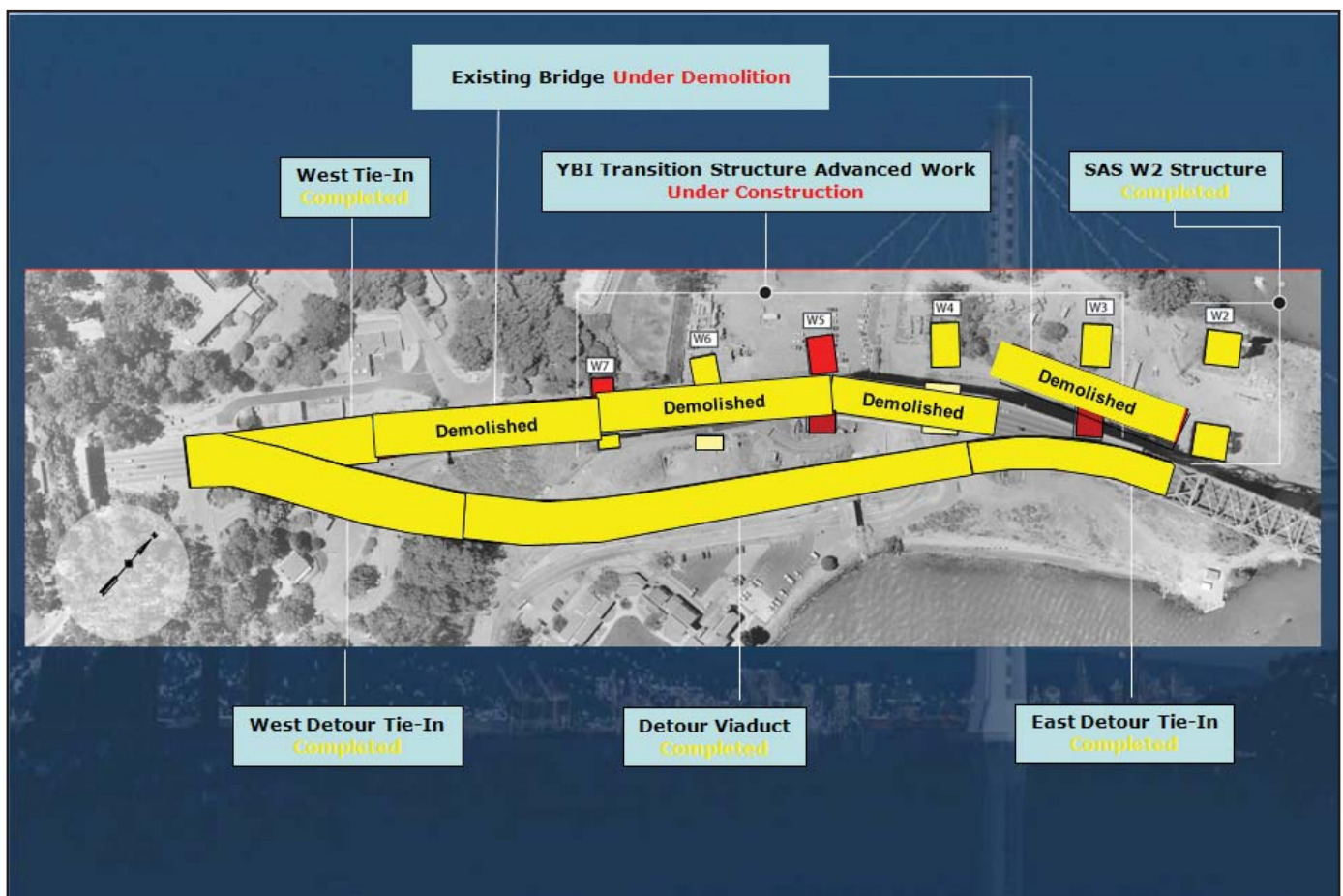
### ***Yerba Buena Island Detour (YBID) Traffic Shift and Existing Approach Bridge Demolition***

To make way for the new bridge, the existing approach structure from the YBI tunnel to the cantilever spans of the East Span need to be demolished. After traffic was realigned onto the detour viaduct, demolition commenced on the removal of the approach structure. When completely removed, the Yerba Buena Island #1 contract will start construction on new approach structures from the tunnel to the SAS.

**Status:** Demolition of the existing approach structure to the tunnel was completed on June 24, 2010.



Original Approach to the Yerba Buena Island Tunnel Demolished and Removed



Overview of Yerba Buena Island Contract Scope of Work and Current Status



## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Yerba Buena Island Transition Structures (YBITS)

The new Yerba Buena Island Transition Structures (YBITS) will connect the new SAS bridge span to the existing Yerba Buena Island Tunnel, transitioning the new side-by-side roadway decks to the upper and lower decks of the tunnel. The new structures will be cast-in-place reinforced concrete structures that will look very similar to the already constructed Skyway structures. While some YBITS foundations and columns have been advanced by the YBID contract, the remaining work will be completed under three separate YBITS contracts.

#### **B** YBITS #1 Contract

Contractor: **MCM Construction, Inc.**

Approved Capital Outlay Budget: **\$144.0 M**

Status: **In Construction**



Overview of YBITS, YBID and Existing East Span

The YBITS #1 contract will construct the mainline roadway structures from the SAS bridge to the YBI tunnel. On December 15, 2009, Caltrans opened three bids for the Yerba Buena Island Transitions Structures (YBITS) #1 contract. On February 4, 2010, Caltrans awarded the YBITS #1 Contract to MCM Construction, Inc. Construction work will start when the YBID contractor has completed demolition of the old viaduct structure. MCM Construction, Inc. is also the firm constructing the Oakland Touchdown #1 contract.

**Status:** MCM Construction started work on submittals on March 10, 2010. Construction is scheduled to start on September 1, 2010.



Rendering of Overview of Future Yerba Buena Island Transition Structures (top) in Progress with Detour Viaduct (bottom) Completed



## YBITS #2 Contract

Contractor: TBD

Current Capital Outlay Forecast: \$59.0 M

Status: **In Design.**

The YBITS #2 contract will demolish the detour viaduct after all traffic is shifted to the new bridge and will construct a new eastbound on-ramp to the bridge in its place. The new ramp will also provide the final link for bicycle/pedestrian access off the SAS bridge onto Yerba Buena Island.

## YBITS Landscaping Contract

Contractor: TBD

Approved Capital Outlay Budget \$3.3M

Status: **In Design.**

Upon completion of the YBITS work, a follow-on landscaping contract will be executed to re-plant and landscape the area.

## Yerba Buena Island Transition Structures Advanced Work

Due to the re-advertisement of the SAS superstructure contract in 2005, it became necessary to temporarily suspend the detour contract and make design changes to the viaduct. To make more effective use of the extended contract duration and to reduce overall project schedule and construction risks, the TBPOC approved the advancement of foundation and column work from the Yerba Buena Island Transition Structures contract.

**Status:** Work continues on the columns for the Yerba Buena Island transition structures.



Yerba Buena Island Transition Structures Advanced Columns



## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Self-Anchored Suspension (SAS) Bridge

If one single element bestows world class status on the new Bay Bridge East Span, it is the Self-Anchored Suspension (SAS) bridge. This engineering marvel will be the world's largest SAS span at 2,047 feet in length, as well as the first bridge of its kind built with a single tower.

The SAS was separated into three separate contracts— construction of the land-based foundations and columns at Pier W2; construction of the marine-based foundations and columns at Piers T1 and E2; and construction of the SAS steel superstructure, including the tower, roadway, and cabling. Construction of the foundations at Pier W2 and at Piers T1 and E2 was completed in 2004 and 2007, respectively.

#### SAS Land Foundation Contract

Contractor: West Bay Builders, Inc.

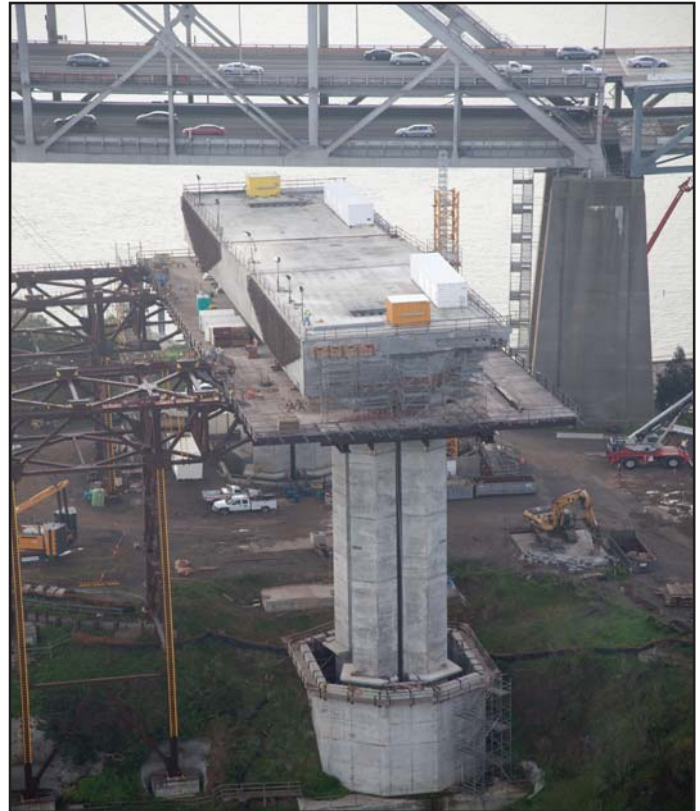
Approved Capital Outlay Budget: \$26.4 M

Status: Completed October 2004

The twin W2 columns on Yerba Buena Island provide essential support for the western end of the SAS bridge, where the single main cable for the suspension span will extend down from the tower and wrap around and under the western end of the roadway deck. Each of these huge columns required massive amounts of concrete and steel and are anchored 80 feet into the island's solid bedrock.



SAS T1 Framing Tower Erection in Progress



SAS Overview of W2 Cap Beam

#### C SAS Marine Foundations Contract

Contractor: Kiewit/FCI/Manson, Joint Venture

Approved Capital Outlay Budget: \$280.9 M

Status: Completed January 2008

Construction of the piers at E2 and T1 required significant on-water resources to drive the foundation support piles down, not only to bedrock, but also through the bay water and mud (see rendering on facing page).

The T1 foundation piles extend 196 feet below the waterline and are anchored into bedrock with heavily reinforced concrete rock sockets that are drilled into the rock. Driven nearly 340 feet deep, the steel and concrete E2 foundation piles were driven 100 feet deeper than the deepest timber piles of the existing east span in order to get through the bay mud and reach solid bedrock.



## **D** SAS Superstructure Contract

Contractor: American Bridge/Fluor Enterprises, Joint Venture

Approved Capital Outlay Budget: \$1.75 B

Status: 52% Complete as of May 2010

The SAS bridge is not just another suspension bridge. Rising 525 feet above mean sea level and embedded in rock, the single-tower SAS span is designed to withstand a massive earthquake. Traditional main cable suspension bridges have twin cables with smaller suspender cables connected to them. These cables hold up the roadbed and are anchored to the east end of the box girders. While there will appear to be two main cables on the SAS, there will actually only be one. This single cable will be anchored within the eastern end of the roadway, carried over the tower and then wrapped around the two side-by-side decks at the western end.

The single-steel tower will be made up of four separate legs connected by shear link beams which function much like a fuse in an electrical circuit. These beams will absorb most of the impact from an earthquake, preventing damage to the tower legs.

The next several pages highlight the construction sequence of the SAS and are followed by detailed updates on specific construction activities.



Architectural Rendering of New Self-Anchored Suspension Span and Skyway



## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### *Self-Anchored Suspension (SAS) Construction Sequence*

#### STEP 1 - CONSTRUCT TEMPORARY SUPPORT STRUCTURES

Temporary support structures will need to be erected from the Skyway to Yerba Buena Island to support the new SAS bridging during construction.

**Status:** Foundations and the temporary support structures are substantially complete.



#### STEP 2 - INSTALL ROADWAYS

The roadway boxes are being lifted into place by using the shear-leg crane barge. The boxes are being bolted and welded together atop the temporary support trusses to form two continuous parallel steel roadway boxes.

**Status:** The second shipment of roadway boxes arrived on April 18, 2010. Six eastbound and westbound roadway boxes have been lifted into place and are being bolted and welded together. To date, five crossbeams have been erected between the roadway boxes.



#### STEP 3 - INSTALL TOWER

Each of the four legs of the tower will be erected in five separate lifts. The tower boxes will be installed using a temporary erection tower and lifting jacks.

**Status:** The first tower lift shipped on June 19, 2010 and is expected to arrive at Pier 7 in San Francisco in mid-July 2010.



#### STEP 4 - MAIN CABLE AND SUSPENDER INSTALLATION

The main cable will be pulled from the east end of the SAS bridge, over the tower, and wrapped around Pier W2 and again back over the tower and to the west end of the SAS bridge deck. Suspender cables will be added to lift the roadway decks off the temporary support structure.

**Status:** Cable installation is pending the erection of the tower and roadway spans. The first half of the cables arrived in January 2010. The second half shipped on June 18, 2010 and is expected to arrive at Pier 7 in San Francisco in mid-July 2010.



#### STEP 5 - WESTBOUND OPENING

The new bridge will first open in the westbound direction pending completion of the Yerba Buena Island Transition Structures.

**Status:** Westbound opening is forecast for summer 2013. The westbound approach from Oakland to the Skyway was completed by the Oakland Touchdown #1 contract in 2009.



#### STEP 6 - EASTBOUND OPENING

Opening of the bridge in the eastbound direction is pending completion of Oakland Touchdown #2. Westbound traffic will need to be routed off the existing bridge before the eastbound approach structure can be completed.

**Status:** The eastbound opening is forecast for December 2013.



## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### *Self-Anchored Suspension (SAS) Superstructure Fabrication Activities*

#### **Roadway and Tower Segments**

Like giant three-dimensional jigsaw puzzles, the roadway and tower boxes of the SAS bridge are hollow steel shells that are internally strengthened and stiffened by a highly engineered network of welded steel ribs and diaphragms. The use of steel in this manner allows for a flexible yet relatively light and strong structure able to withstand the massive loads placed on the bridge during seismic events.

On the critical path to completing the bridge are the fabrication of the last four roadway boxes (segments 13 and 14 east and west). Start of fabrication of these boxes has fallen behind schedule due to delays in the fabrication drawing preparation process. These delays will likely preclude the westbound opening of the bridge in 2012, but the push for the opening of the bridge to traffic in both directions in 2013 continues.

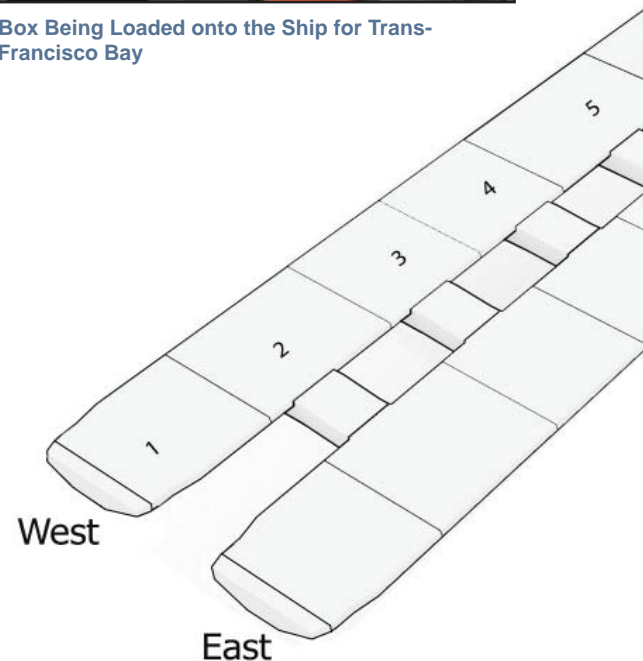
All components undergo a rigorous quality review by ZPMC, ABF, and Caltrans to ensure that only bridge components that have been built in accordance to contract specifications will be shipped.

**Roadway Box Fabrication Status:** As shown in the diagram to the right, roadway boxes 1 through 6 east and west have been completed and shipped to the Bay Area. Boxes 7 through 9 east and west are in trial assembly or painting. The remaining boxes are still being pieced together into larger segments. Fabrication of sub-assemblies for box 13 has started.

**Tower Fabrication Status:** Each of the four legs of the towers is composed of five separate lifts. The lifts get progressively shorter and lighter as they progress up the tower. Currently, the first four lifts of tower boxes are in various stages of fabrications with lifts 1 and 2 furthest along. Tower boxes 1 and 2 have been trial-fit together to ensure alignment. First tower boxes shipped on June 19, 2010 and is expected to arrive in San Francisco in mid-July 2010.



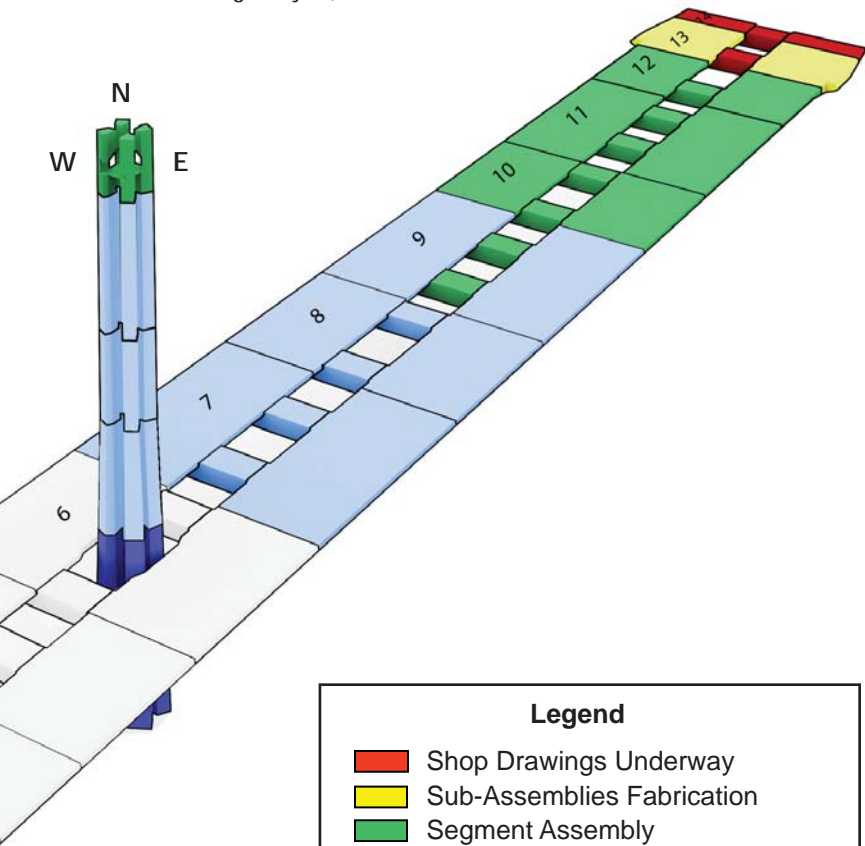
First Tower Box Being Loaded onto the Ship for Transport to San Francisco Bay





# Fabrication Progress Diagram

Through May 30, 2010



## Legend

- Shop Drawings Underway
- Sub-Assemblies Fabrication
- Segment Assembly
- Blast, Paint & Fit Up
- Ready To Ship/In Transit
- On Site/In Place

Through June 30, 2010



First Tower Boxes Being Loaded onto the Transport Ship



First Tower Boxes Being Loaded onto the Transport Ship



First Tower Boxes Being Loaded onto the Transport Ship



## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### ***Self-Anchored Suspension (SAS) Superstructure Fabrication Activities (cont.)***

#### ***Cables and Suspenders***

One continuous main cable will be used to support the roadway deck of the SAS bridge. Anchored into the eastern end of the bridge, the main cable will be anchored with the roadway box at the east end of the SAS near Pier E1, go over the main tower at T1, loop around the western end of the roadway decks at Pier W2, and then go back over the main tower to the western end of the box girder. The main cable will be made up of bundles of individual wire strands. Supporting the roadway decks to the main cable will be a number of smaller suspender cables. The main cable will be fabricated in China and the suspender cables in Missouri, USA.

**Status:** The first half of the cable shipment arrived in at Pier 7 in San Francisco in January 2010 and the second half is expected in the summer of 2010.



SAS Suspender Cable Clamps

#### ***Saddles, Bearings, Hinges, and Other Bridge Components***

The mounts on which the main cable and suspender ropes will sit are made from solid steel castings. Castings for the main cable saddles are being made by Japan Steel Works, while the cable bands and brackets are being made by Goodwin Steel in the United Kingdom.

The bridge bearings and hinges that support, connect, and transfer loads from the self-anchored suspension (SAS) span to the adjoining sections of the new east span are being fabricated in a number of locations. Work on the bearings is being performed in Pennsylvania, USA and Hochang, South Korea, while hinge pipe beams are being fabricated in Oregon, USA.

**Status:** The cable saddles and hinges at the W2 cap beam and YBITS are under fabrication. The west deviation saddles arrived at Pier 7 in San Francisco on April 15, 2010.



SAS Shear- Key Assembly

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### *Self-Anchored Suspension (SAS) Superstructure Field Activities*



Shear-Leg Barge Crane

#### ***Shear-Leg Barge Crane***

The massive shear-leg barge crane that is helping to build the SAS superstructure arrived in the San Francisco Bay on March 12, 2009 after a trans-Pacific voyage.

The crane and barge are separate units operating as a single entity named the “Left Coast Lifter.” The 400-by-100-foot barge is a U.S. flagged vessel that was custom built in Portland, Oregon by U.S. Barge, LLC and outfitted with the crane by Shanghai Zhenhua Heavy Industry Co. Ltd. (ZPMC) at a facility near Shanghai, China. The crane's boom weighs 992 tons and is 328 feet long. The crane can lift up to 1,873 tons, including the deck and tower boxes for the SAS.

**Status:** The shear-leg barge crane arrived at the job site March 2009. The crane has off-loaded and placed all temporary support structures and SAS roadway boxes and crossbeams.

#### ***Temporary Support Structures***

To erect the roadway decks and tower of the bridge, temporary support structures were first put in place. Almost a bridge in itself, the temporary support structures stretch from the end of the completed Skyway back to Yerba Buena Island. For the tower, a strand jack system is being built into the tower's temporary frame to elevate the upper sections of the tower into place. These temporary supports are being fabricated in the Bay Area, as well as in Oregon and in China at ZPMC.

**Status:** The temporary support structures are substantially complete. A mid section of the westbound truss has been left out for installation of tower lift 1.

#### ***Cap Beams***

Construction of the massive steel-reinforced concrete cap beams that link the columns at piers W2 and E2 was left to the SAS superstructure contractor and represents the only concrete portions of work on that contract. The east and west ends of the SAS roadway will rest on the cap beams and the main cable will wrap around Pier W2, while anchoring into the east end of the SAS deck sections near E2.



Temporary Structures Supporting Eastbound and Westbound Roadway Boxes and Crossbeams



SAS W2 Cap Beam and the First Eastbound Connected Roadway Boxes

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### *Self-Anchored Suspension (SAS) Superstructure Installation Activities*

Upon arrival in Oakland, the steel roadway and tower sections are off-loaded directly from the transport ship onto barges to await installation atop the temporary support structures. Steel roadway boxes will be installed from west to east. Due to the shallow waters near Yerba Buena Island, the eastbound lanes on the south side of the new bridge will be installed first, then to be followed by the westbound lanes. In total, there are 28 roadway boxes (14 in each direction) that range from 560 to 1660 tons and from 80 to 230 feet long.

The tower comprises four legs, each made up of four tower lifts that make up the majority of the height of the tower, the tower grillage, and finally the tower head.

**Status:** The first four east and four west roadway boxes arrived in the Bay Area in late January 2010. All have been lifted into place and are now being welded together. Four additional roadway boxes arrived on April 18, 2010 and all four were lifted into place and are being welded together to form a continuous roadway.







SAS Shearleg Crane Placing Roadway Box 6 on the Temporary Support Structures



SAS Moving Crossbeam 4 to Its Final Location

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Skyway

The Skyway, which comprises much of the new East Span, will drastically change the appearance of the Bay Bridge. Replacing the gray steel that currently cages drivers, a graceful, elevated roadway supported by piers will provide sweeping views of the bay.

#### **E Skyway Contract**

**Contractor:** Kiewit/FCI/Manson, Joint Venture

**Approved Capital Outlay Budget:** \$1.25 B

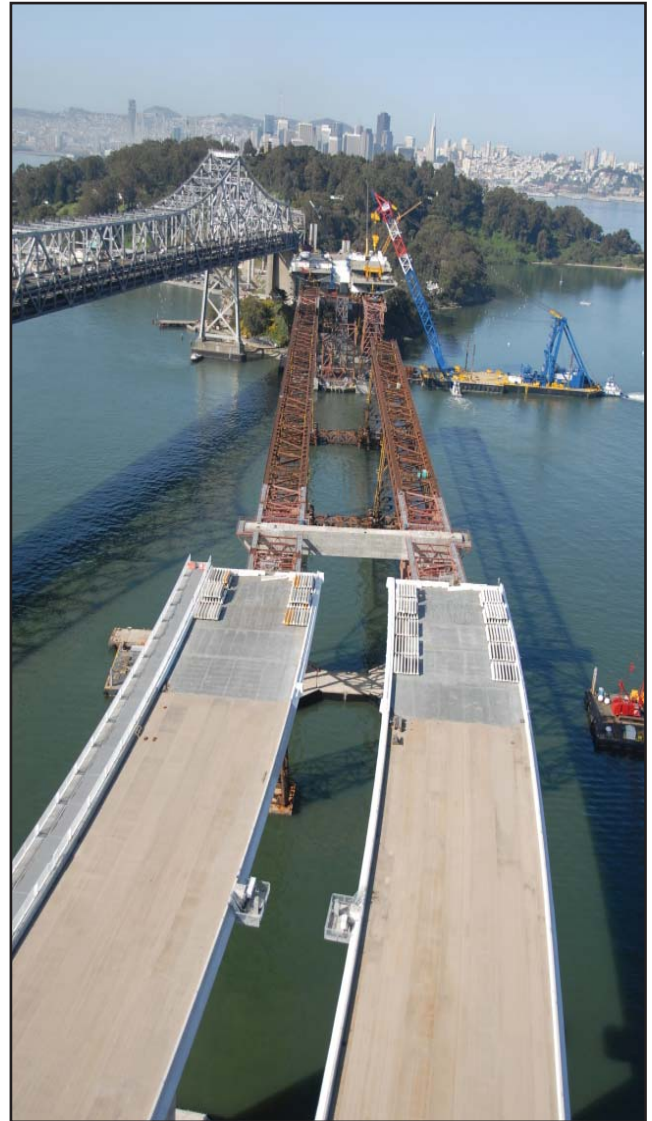
**Status:** Completed March 2008

Extending for more than a mile across Oakland mudflats, the Skyway is the longest section of the East Span. It sits between the new Self-Anchored Suspension (SAS) span and the Oakland Touchdown. In addition to incorporating the latest seismic-safety technology, the side-by-side roadway decks of the Skyway feature shoulders and lane widths built to modern standards.

The Skyway's decks are composed of 452 pre-cast concrete segments (standing three stories high), containing approximately 200 million pounds of structural steel, 120 million pounds of reinforcing steel, 200 thousand linear feet of piling and about 450 thousand cubic yards of concrete. These are the largest segments of their kind ever cast and were lifted into place by custom-made winches.

The Skyway marine foundation consists of 160 hollow steel pipe piles measuring eight feet in diameter and dispersed among 14 sets of piers. The 365-ton piles were driven more than 300 feet into the deep bay mud. The new East Span piles were battered or driven in at an angle, rather than vertically, to obtain maximum strength and resistance.

Designed specifically to move during a major earthquake, the Skyway features several state-of-the-art seismic safety innovations, including 60-foot-long hinge pipe beams. These beams will allow deck segments on the Skyway to move, enabling the deck to withstand greater motion and to absorb more earthquake energy.



Overview of the Skyway and the Temporary Support Structures with the Shear-Leg Barge Crane Lifting Roadway Boxes or Orthotropic Box Girders (OBG) into Place





## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project

#### Oakland Touchdown

When completed, the Oakland Touchdown (OTD) structures will connect Interstate 80 in Oakland to the new side-by-side decks of the new East Span. For westbound drivers, the OTD will be their introduction to the graceful new East Span. For eastbound drivers from San Francisco, this section of the bridge will carry them from the Skyway to the East Bay, offering unobstructed views of the Oakland hills.

The OTD will be constructed through two contracts. The first contract will build the new westbound lanes, as well as part of the eastbound lanes. The second contract to complete the eastbound lanes cannot fully begin until westbound traffic is shifted onto the new bridge. This enables a portion of the upper deck of the existing bridge to be demolished allowing for a smooth transition for the new eastbound lanes in Oakland.

#### **F** Oakland Touchdown #1 Contract

**Contractor:** MCM Construction, Inc.  
**Approved Capital Outlay Budget:** \$212.0 M  
**Status:** Completed June 2010

The OTD #1 contract constructs the entire 1,000-foot-long westbound approach from the toll plaza to the Skyway. When completed, the westbound approach structure will provide direct access to the westbound Skyway. In the eastbound direction, the contract will construct a portion of the eastbound structure and all of the eastbound foundations that are not in conflict with the existing bridge.

**Status:** MCM Construction, Inc. completed OTD #1 westbound and eastbound phase 1 on June 8, 2010.

#### **G** Oakland Touchdown #2 Contract

**Contractor:** TBD  
**Approved Capital Outlay Budget:** \$62.0 M  
**Status:** In Design

The OTD #2 contract will complete the eastbound approach structure from the end of the Skyway to Oakland. This work is critical to the eastbound opening of the new bridge, but cannot be completed until westbound traffic has been shifted off the existing upper deck to the new SAS bridge.



Overview of Oakland Touchdown #1 Project Status Looking West

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Other Contracts

A number of contracts needed to relocate utilities, clear areas of archeological artifacts, and prepare areas for future work have already been completed. The last major contract will be the eventual demolition and removal of the existing bridge, which by that time will have served the Bay Area for nearly 80 years. Following is a status of some the other East Span contracts.



Archeological Investigations

### East Span Interim Seismic Retrofit

Contractors: 1) California Engineering  
2) Balfour Beatty

Approved Capital Outlay Budget: \$30.8 M

Status: Completed October 2000

After the 1989 Loma Prieta Earthquake, and before the final retrofit strategy was determined for the East Span, Caltrans completed an interim retrofit of the existing bridge to prevent a catastrophic collapse of the bridge should a similar earthquake occur before the East Span was completely replaced. The interim retrofit was performed under two separate contracts that lengthened pier seats, added some structural members, and strengthened areas of the bridge so they would be more resilient during an earthquake.



Existing East Span of the San Francisco-Oakland Bay Bridge

### Stormwater Treatment Measures

Contractor: Diablo Construction, Inc.

Approved Capital Outlay Budget: \$18.3 M

Status: Completed December 2008

The Stormwater Treatment Measures contract implemented a number of best practices for the management and treatment of stormwater runoff. Focused on the areas around and approaching the toll plaza, the contract added new drainage and built new bio-retention swales and other related constructs.



Stormwater Retention Basin



## Yerba Buena Island Substation

Contractor: West Bay Builders

Approved Capital Outlay Budget: \$11.6 M

Status: Completed May 2005

This contract relocated an electrical substation just east of the Yerba Buena Island Tunnel in preparation for the new East Span.

## Pile Installation Demonstration

Contractor: Manson and Dutra, Joint Venture

Approved Capital Outlay Budget: \$9.2 M

Status: Completed December 2000

While large-diameter battered piles are common in offshore drilling, the new East Span is one of the first bridges to use them in its foundations. To minimize project risks and build industry knowledge, a pile installation demonstration project was initiated to prove the efficacy of the proposed technology and methodology. The demonstration was highly successful and helped result in zero contract change orders or claims for pile driving on the project.

## H Existing Bridge Demolition

Contractor: TBD

Approved Capital Outlay Budget: \$239.1 M

Status: In Design

Design work on the contract will start in earnest as the opening of the new bridge to traffic approaches.



New YBI Electrical Substation

## I Electrical Cable Relocation

Contractor: Manson Construction

Approved Capital Outlay Budget: \$9.6 M

Status: Completed January 2008

A submerged cable from Oakland that is close to where the new bridge will touch down supplies electrical power to Treasure Island. To avoid any possible damage to the cable during construction, two new replacement cables were run from Oakland to Treasure Island. The extra cable was funded by the Treasure Island Development Authority.

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### Antioch Bridge Seismic Retrofit Project

Contractor: California Engineering Contractors, Inc.

Approved Capital Outlay Budget: \$156.0 M

Status: In Construction

Serving the Delta region of the Bay Area, the Antioch Bridge takes State Route 160 traffic over the San Joaquin River, linking eastern Contra Costa County with Sacramento County. The current 1.8-mile-long steel plate girder bridge was opened in 1978 with one lane in each direction. The current retrofit strategy for the bridge includes relatively minor modifications to the approach structure on Sherman Island, the addition of isolation bearings and strengthening of the columns and hinge retrofits.

**Status:** Bids for the retrofit contract were opened on March 10, 2010. The contract was awarded to California Engineering Contractors, Inc. on April 22, 2010. The awarded contract was significantly less than the engineer's estimate for the work and has resulted in a significant cost forecast reduction. The TBPOC is recommending that the budget for the project be reduced to account for the low bid. The original budget for the project was \$267 million.



Antioch Bridge

With the low bid, the TBPOC is forecasting a need of only \$130 million. The retrofit is forecast to be completed by May 2012.

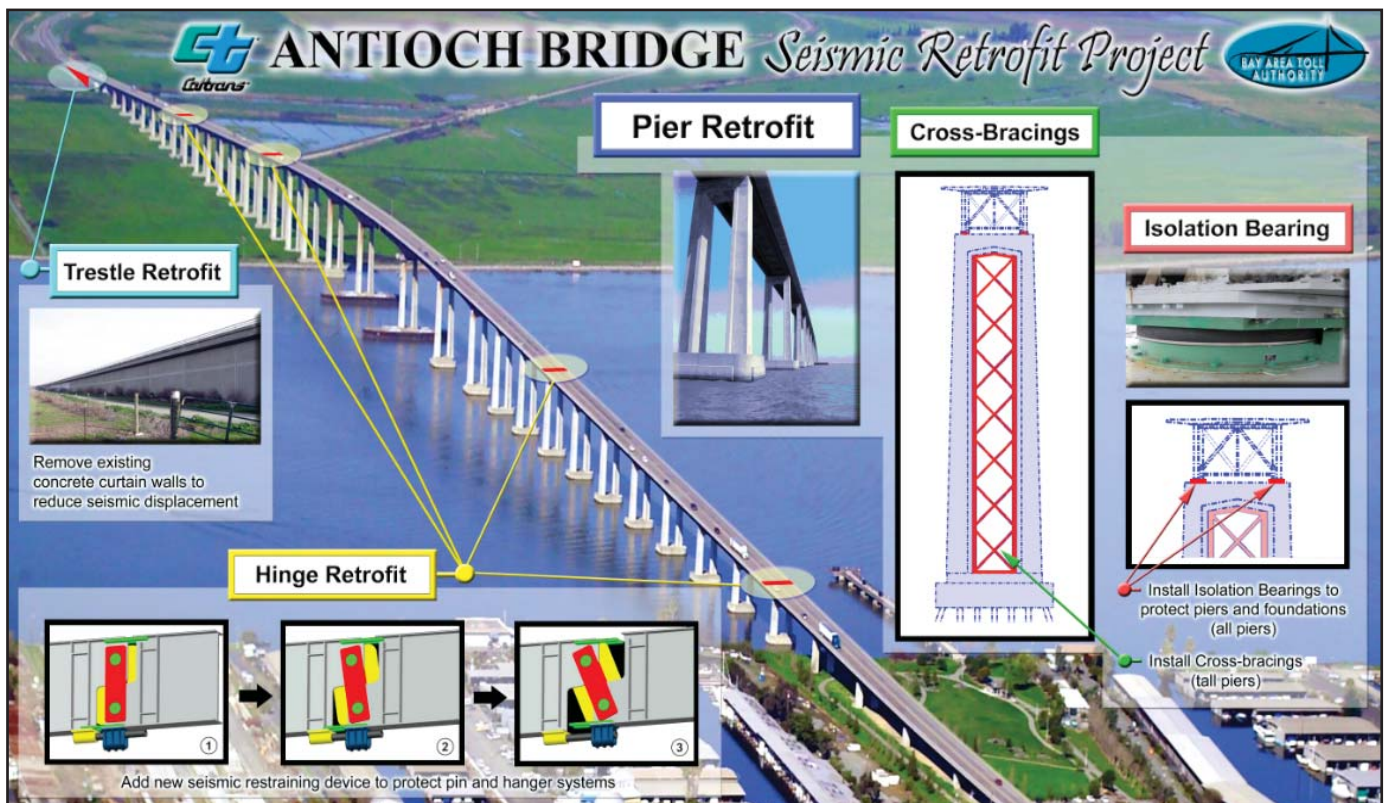


Diagram of Proposed Retrofit Work on the Antioch Bridge



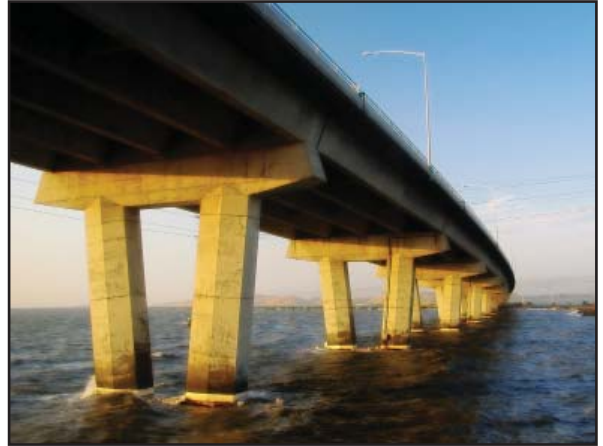
## Dumbarton Bridge Seismic Retrofit Project

Contractor: TBD

Approved Capital Outlay Budget: \$270.0 M

Status: Advertised

The current Dumbarton Bridge was opened to traffic in 1982 linking the cities of Newark in Alameda County and East Palo Alto in San Mateo County. The 1.6-mile long bridge has six lanes (three in each direction) and an eight-foot bicycle/pedestrian pathway. The bridge is a combination of reinforced concrete and steel girders that support a reinforced lightweight concrete roadway on reinforced concrete columns. The current retrofit strategy for the bridge includes superstructure and deck modifications and installation of isolation bearings.



Dumbarton Bridge

**Status:** Bids for the Dumbarton Bridge Seismic Retrofit were opened on June 15, 2010. The lowest bids were substantially lower than the engineer's estimate. Caltrans is in the process of evaluating the bids to determine the lowest responsive bidder.

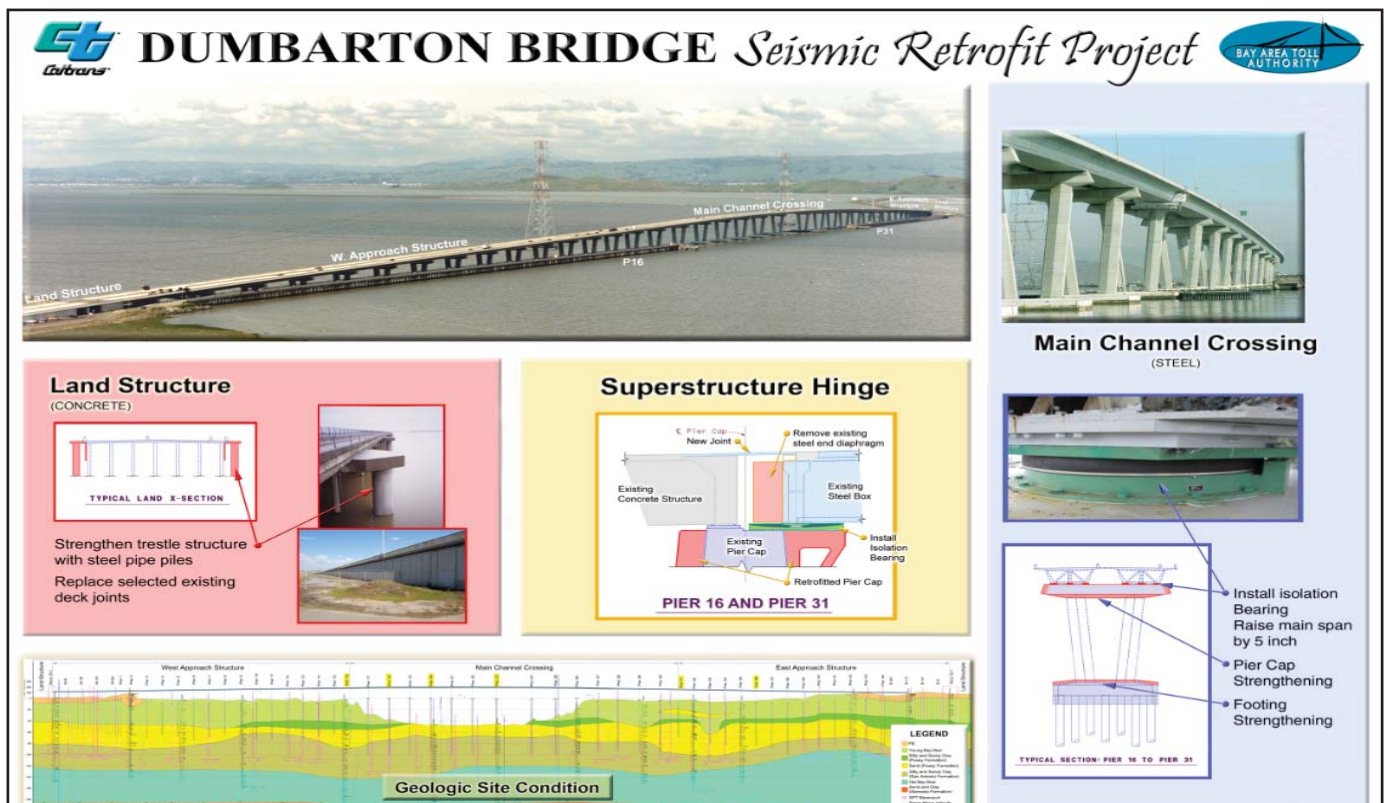


Diagram of Proposed Retrofit Work on the Dumbarton Bridge

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### Other Completed Projects

In the 1990s, the State Legislature identified seven of the nine state-owned toll bridges for seismic retrofit. In addition to the San Francisco-Oakland Bay Bridge, these included the Benicia-Martinez, Carquinez, Richmond-San Rafael and San Mateo-Hayward bridges in the Bay Area, and the Vincent Thomas and Coronado bridges in Southern California. Other than the East Span of the Bay Bridge, the retrofits of all of the bridges have been completed as planned.

#### San Mateo-Hayward Bridge Seismic Retrofit Project

**Project Status: Completed 2000**

The San Mateo-Hayward Bridge seismic retrofit project focused on strengthening the high-rise portion of the span. The foundations of the bridge were significantly upgraded with additional piles.



High-Rise Section of San Mateo-Hayward Bridge

#### 1958 Carquinez Bridge Seismic Retrofit Project

**Project Status: Completed 2002**

The eastbound 1958 Carquinez Bridge was retrofitted in 2002 with additional reinforcement of the cantilever thru-truss structure.

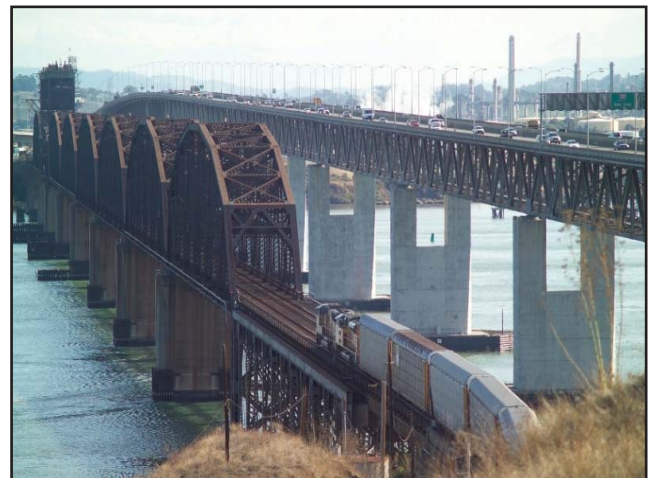


1958 Carquinez Bridge (foreground) with the 1927 Span (middle) under Demolition and the New Alfred Zampa Memorial Bridge (background)

#### 1962 Benicia-Martinez Bridge Seismic Retrofit Project

**Project Status: Completed 2003**

The southbound 1962 Benicia-Martinez Bridge was retrofitted to "Lifeline" status with the strengthening of the foundations and columns and the addition of seismic bearings that allow the bridge to move during a major seismic event. The Lifeline status means the bridge is designed to sustain minor to moderate damage after an event and to reopen quickly to emergency response traffic.



1962 Benicia-Martinez Bridge (right)



## Richmond-San Rafael Bridge Seismic Retrofit Project

**Project Status: Completed 2005**

The Richmond-San Rafael Bridge was retrofitted to a “No Collapse” classification to avoid catastrophic failure during a major seismic event. The foundations, columns, and truss of the bridge were strengthened, and the entire low-rise approach viaduct from Marin County was replaced.



Richmond-San Rafael Bridge

## Los Angeles-Vincent Thomas Bridge Seismic Retrofit Project

**Project Status: Completed 2000**

The Vincent Thomas Bridge is a 1,500-foot long suspension bridge crossing the Los Angeles Harbor in Los Angeles that links San Pedro with Terminal Island. The bridge was one of two state-owned toll bridges in Southern California (the other being the San Diego-Coronado Bridge). Opened in 1963, the bridge was seismically retrofitted as part of the TBSRP in 2000.



Los Angeles-Vincent Thomas Bridge

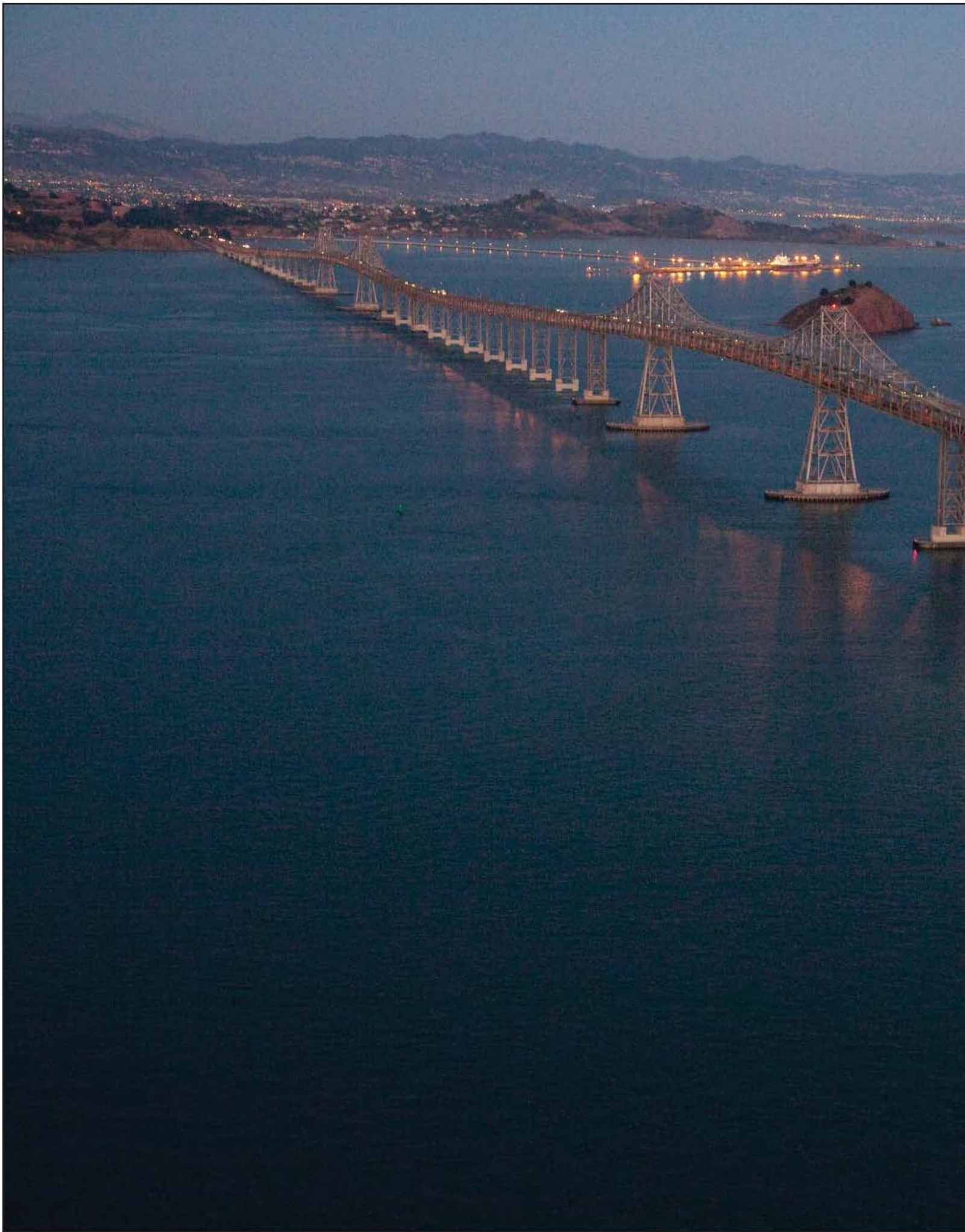
## San Diego-Coronado Bridge Seismic Retrofit Project

**Project Status: Completed 2002**

The San Diego-Coronado Bridge crosses over San Diego Bay and links the cities of San Diego and Coronado. Opened in 1969, the 2.1-mile long bridge was seismically retrofitted as part of the Toll Bridge Seismic Retrofit Project in 2002.



San Diego-Coronado Bridge







Richmond-San Rafael Bridge

## REGIONAL MEASURE 1 TOLL BRIDGE PROGRAM



## REGIONAL MEASURE 1 PROGRAM

### Interstate 880/State Route 92 Interchange Reconstruction Project

**Project Status: In Construction**

The Interstate 880/State Route 92 Interchange Reconstruction Project is the final project under the Regional Measure 1 Toll Bridge Program. Project completion fulfills a promise made to Bay Area voters in 1988 to deliver a slate of projects that help expand bridge capacity and improve safety on the bridges.

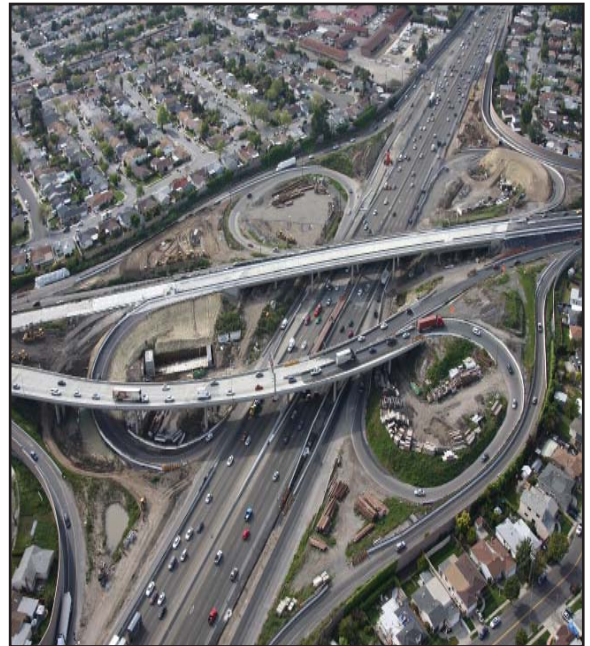
This corridor is consistently one of the Bay Area's most congested during the evening commute. This is due in part to the lane merging and weaving that is required by the existing cloverleaf interchange. The new interchange will feature direct freeway-to-freeway connector ramps that will increase traffic capacity and improve overall safety and traffic operations in the area. With the new direct-connector ramps, drivers coming off the San Mateo-Hayward Bridge can access Interstate 880 without having to compete with traffic headed onto east Route 92 from south Interstate 880 (see progress photos on pages 74 and 75).

### Interstate 880/State Route 92 Interchange Reconstruction Contract

Contractor: Flatiron/Granite

Approved Capital Outlay Budget: \$156.0 M

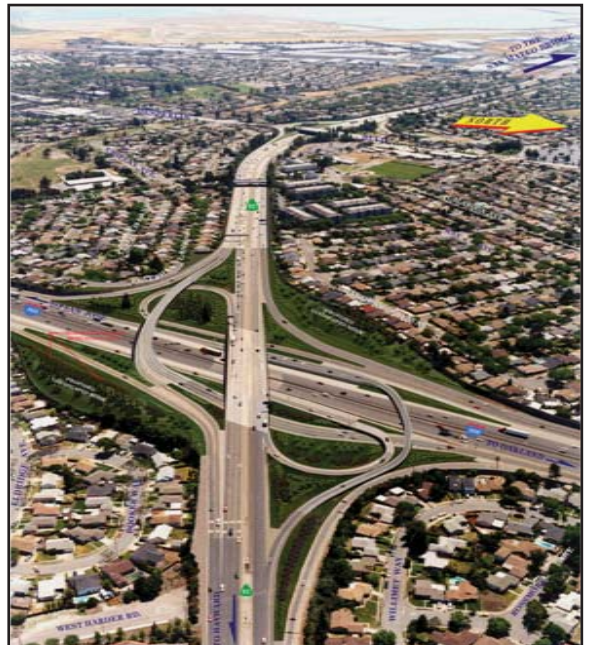
Status: 72% Complete as Of June 2010



Overview of 92/880



92/880 Construction in Progress



Future Interstate 880/State Route 92 Interchange  
(as simulated) Looking West toward San Mateo



### **Stage 1 – Construct East Route 92 to North Interstate 880 Connector**

The new east Route 92 to north Interstate 880 connector (ENCONN) is the most critical fly over structure for relieving congestion in the corridor. The ENCONN will be first used as a detour to allow for future stages of work, while keeping traffic flowing.

**Status:** ENCONN was completed and opened to detour traffic on May 16, 2009.

### **Stage 2 – Replace South Side of Route 92 Separation Structure**

By detouring eastbound Route 92 traffic onto ENCONN, the existing separation structure that carries SR92 over I-880 can be replaced. The existing structure will be cut lengthwise, and then demolished and replaced separately. In this stage, the south side of the structure will be replaced, while west Route 92 and south-Interstate-880-to-east-Route-92 traffic will stay on the remaining structure.

**Status:** Work on the south side of the separation structure is complete.

### **Stage 3 – Replace North Side of Route 92 Separation Structure**

Upon completion of Stage 2, the existing north side of the separation structure will be demolished and replaced. Its traffic will then be shifted onto the newly reconstructed south side.

**Status:** The demolition of the existing westbound separation structure (north side) was completed on May 5, 2010.

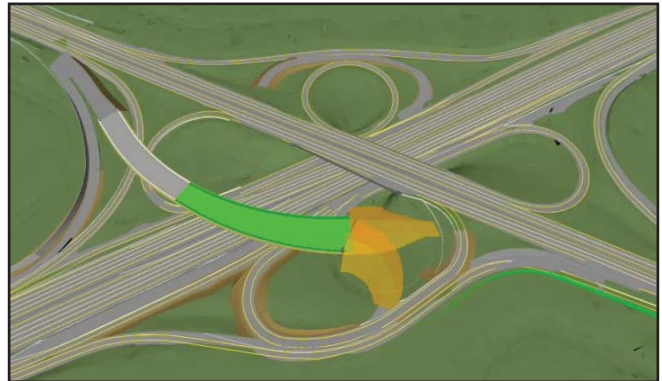
### **Stage 4 – Final Realignment and Other Work**

Upon completion of the Route 92 separation structure, east Route 92 traffic can be shifted onto its permanent alignment from the new ENCONN and directly under the new separation structure. Along with the ENCONN and Route 92 separation structures, several soundwalls, a pedestrian overcrossing on I-880 at Eldridge Avenue and other ramps and structures will also be reconstructed as part of this project. Work will begin at the North to West Connector Bridge (NWCONN).

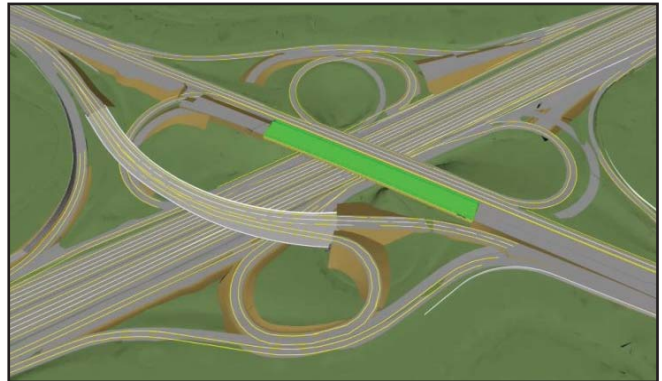
As part of this construction sequence, the retaining wall D1 / D2 is key to completion of this work. This traffic movement will allow for reducing congestion moving on I-880 North to SR-92 Westbound. The final structure to be completed moves traffic from eastbound SR92 to southbound I-880. This structure is the West to South Connector Bridge (WSCONN).

**Status:** Work is completed on retaining wall A in the northwest quadrant. The new Eldridge Avenue pedestrian overcrossing will be opened by August 6, 2010 and is currently 85 percent complete. The new pump station construction is ongoing and scheduled to be completed in August 2010. The westbound SR-92 separation structure commenced construction in April 2010. The demolition of the existing structure is complete and the start of construction for the new separation structure has started.

The Calaroga Bridge temporary bridge was completed January 15, 2010. The Calaroga left bridge is approximately 75 percent complete and is forecast to complete in August 2010. Upon completion of the left bridge the right bridge will be constructed and is forecast to be complete the first quarter of 2011. NWCONN is currently forecast to be completed by the end of 2010.



**Stage 1 - Construct East Route 92 to North Interstate 880 Direct Connector**



**Stage 2 - Demolish and Replace South Side of Route 92 Separation Structure**



**Stage 3 - Demolish and Replace North Side of Route 92 Separation Structure**



**Stage 4 - Final Realignment and Other Work**

## REGIONAL MEASURE 1 PROGRAM

### Other Completed Projects

#### San Mateo-Hayward Bridge-Widening Project

**Project Status: Completed 2003**

This project expanded the low-rise concrete trestle section of the San Mateo-Hayward Bridge to allow for three lanes in each direction to match the existing configuration of the high-rise steel section of the bridge.



Widening of the San Mateo-Hayward Bridge Trestle on Left

#### Richmond-San Rafael Bridge Rehabilitation Projects

**Project Status: Completed 2006**

Two major rehabilitation projects for the Richmond-San Rafael Bridge were funded and completed: (1) replacement of the western concrete approach trestle and ship-collision protection fender system; and (2) rehabilitation of deck joints and resurfacing of the bridge deck.

In 2005, along with the seismic retrofit of the bridge, the trestle and fender replacement work was completed as part of the same project. Under a separate contract in 2006, the bridge was resurfaced with a polyester concrete overlay along with the repair of numerous deck joints.



New Richmond-San Rafael Bridge West Approach Trestle under Construction

#### Richmond Parkway Construction Project

**Project Status: Completed 2001**

The final connections to the Richmond Parkway from Interstate 580 near the Richmond-San Rafael Bridge were completed in May 2001.



## New Alfred Zampa Memorial (Carquinez) Bridge Project

**Project Status: Completed 2003**



New Alfred Zampa Memorial (Carquinez) Bridge Soon after Opening to Traffic, with Crockett Interchange Still under Construction

The new western span of the Carquinez Bridge, which replaced the original 1927 span, is a twin-towered suspension bridge with three mixed-flow lanes, a new carpool lane shoulders and a bicycle and pedestrian pathway.

## Benicia-Martinez Bridge Project

**Project Status: Completed 2009**



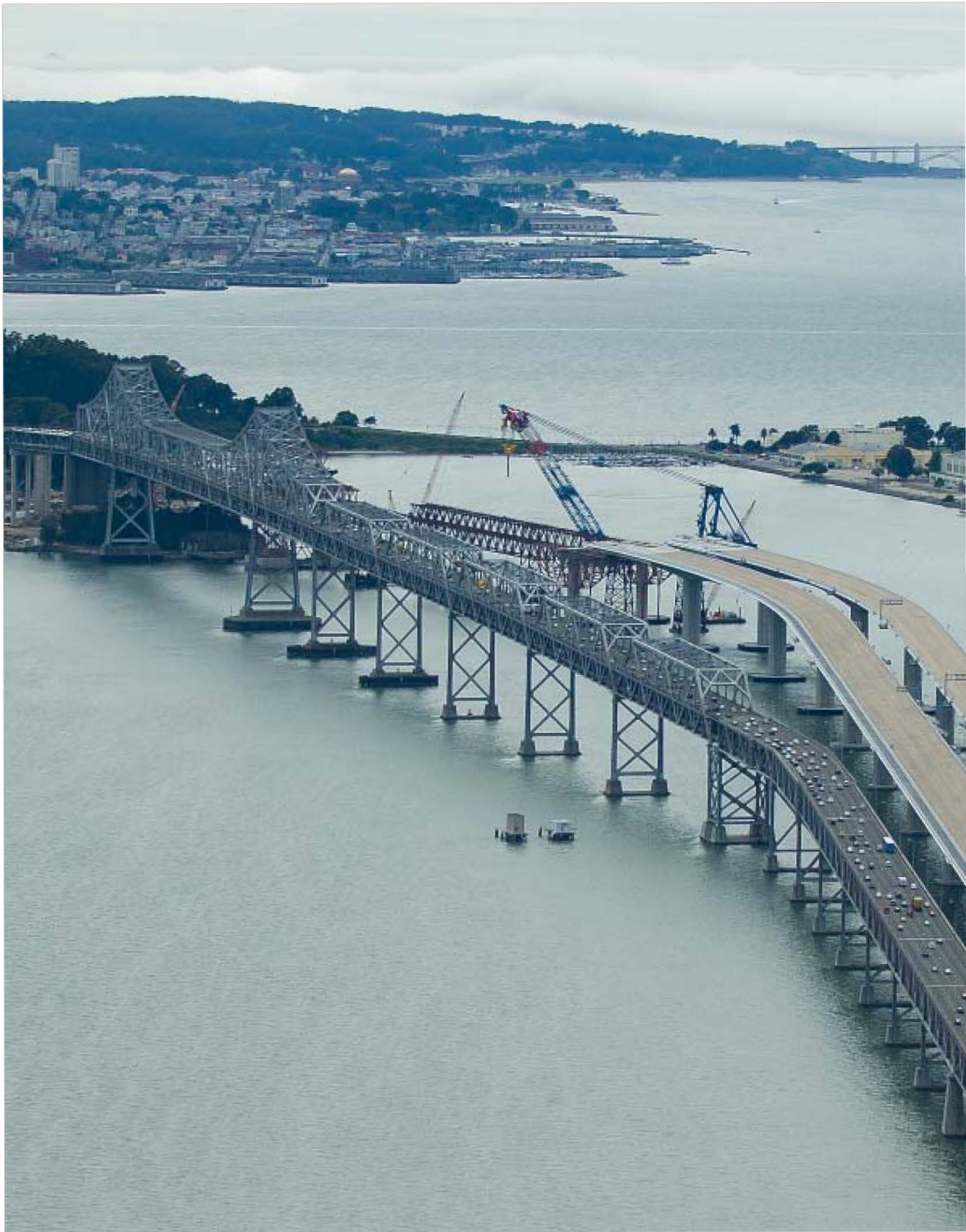
Benicia-Martinez Bridge Pedestrian/Bicycle Pathway Opened to the Public in August 2009

A two-year project to rehabilitate and reconfigure the original Benicia-Martinez Bridge began shortly after the opening of the new Congressman George Miller Bridge. The existing 1.2-mile roadway surface on the steel deck truss bridge was modified to carry four lanes of southbound traffic (one more than before)—with shoulders on both sides—plus a bicycle/pedestrian path on the west side of the span that connects to Park Road in Benicia and to Marina Vista Boulevard in Martinez. Reconstruction of the east side of the bridge and approaches was completed in August 2008 and reconstruction of the west side of the bridge an approaches and construction of the bicycle/pedestrian pathway was completed in August 2009.

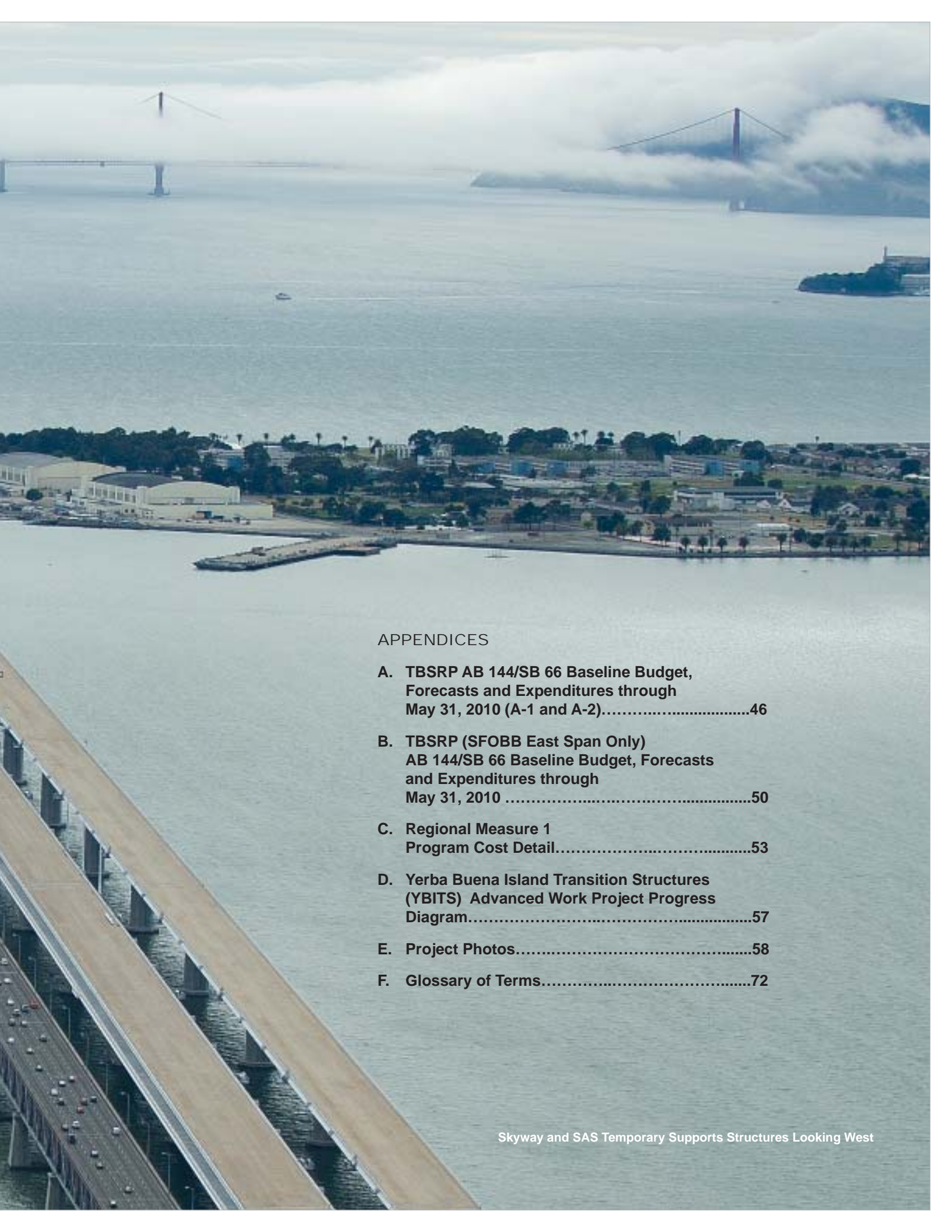
## Bayfront Expressway (State Route 84) Widening Project

**Project Status: Completed 2004**

This project expanded and improved the roadway from the Dumbarton Bridge touchdown to the US 101/Marsh Road interchange by adding additional lanes and turn pockets and improving bicycle and pedestrian access in the area.







## APPENDICES

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## Appendix A-1: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through May 31, 2010 (\$ Millions)

Contract a	AB 144 / SB 66 Budget (07/2005) c	Approved Changes d	Current Approved Budget (05/2010) e = c + d	Cost To Date (05/2010) f	Cost Forecast (05/2010) g	At- Completion Variance h = g - e
<b>SFOBB East Span Replacement Project</b>						
Capital Outlay Support	959.3	-	959.3	846.1	1,262.2	302.9
Capital Outlay Construction	4,492.2	203.8	4,696.0	3,338.8	4,929.3	233.3
Other Budgeted Capital	35.1	(3.3)	31.8	0.7	7.7	(24.1)
<b>Total</b>	<b>5,486.6</b>	<b>200.5</b>	<b>5,687.1</b>	<b>4,185.6</b>	<b>6,199.2</b>	<b>512.1</b>
<b>SFOBB West Approach Replacement</b>						
Capital Outlay Support	120.0	(3.0)	117.0	117.5	118.0	1.0
Capital Outlay Construction	309.0	41.7	350.7	328.0	338.1	(12.6)
<b>Total</b>	<b>429.0</b>	<b>38.7</b>	<b>467.7</b>	<b>445.5</b>	<b>456.1</b>	<b>(11.6)</b>
<b>SFOBB West Span Retrofit</b>						
Capital Outlay Support	75.0	-	75.0	74.8	75.0	-
Capital Outlay Construction	232.9	-	232.9	227.3	227.5	(5.4)
<b>Total</b>	<b>307.9</b>	<b>-</b>	<b>307.9</b>	<b>302.1</b>	<b>302.5</b>	<b>(5.4)</b>
<b>Richmond-San Rafael Bridge Retrofit</b>						
Capital Outlay Support	134.0	(7.0)	127.0	126.7	127.0	-
Capital Outlay Construction	780.0	(90.5)	689.5	667.5	689.5	-
<b>Total</b>	<b>914.0</b>	<b>(97.5)</b>	<b>816.5</b>	<b>794.2</b>	<b>816.5</b>	<b>-</b>
<b>Benicia-Martinez Bridge Retrofit</b>						
Capital Outlay Support	38.1	-	38.1	38.1	38.1	-
Capital Outlay Construction	139.7	-	139.7	139.7	139.7	-
<b>Total</b>	<b>177.8</b>	<b>-</b>	<b>177.8</b>	<b>177.8</b>	<b>177.8</b>	<b>-</b>
<b>Carquinez Bridge Retrofit</b>						
Capital Outlay Support	28.7	-	28.7	28.8	28.7	-
Capital Outlay Construction	85.5	-	85.5	85.4	85.5	-
<b>Total</b>	<b>114.2</b>	<b>-</b>	<b>114.2</b>	<b>114.2</b>	<b>114.2</b>	<b>-</b>
<b>San Mateo-Hayward Bridge Retrofit</b>						
Capital Outlay Support	28.1	-	28.1	28.1	28.1	-
Capital Outlay Construction	135.4	-	135.4	135.3	135.4	-
<b>Total</b>	<b>163.5</b>	<b>-</b>	<b>163.5</b>	<b>163.4</b>	<b>163.5</b>	<b>-</b>
<b>Vincent Thomas Bridge Retrofit (Los Angeles)</b>						
Capital Outlay Support	16.4	-	16.4	16.4	16.4	-
Capital Outlay Construction	42.1	-	42.1	42.0	42.1	-
<b>Total</b>	<b>58.5</b>	<b>-</b>	<b>58.5</b>	<b>58.4</b>	<b>58.5</b>	<b>-</b>
<b>San Diego-Coronado Bridge Retrofit</b>						
Capital Outlay Support	33.5	-	33.5	33.2	33.5	-
Capital Outlay Construction	70.0	-	70.0	69.4	70.0	-
<b>Total</b>	<b>103.5</b>	<b>-</b>	<b>103.5</b>	<b>102.6</b>	<b>103.5</b>	<b>-</b>

Note: Details may not sum to totals due to rounding effects.



## Appendix A-1: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through May 31, 2010 (\$ Millions) Cont.

Contract a	AB 144 / SB 66 Budget (07/2005) c	Approved Changes d	Current Approved Budget (05/2010) e = c + d	Cost To Date (05/2010) f	Cost Forecast (05/2010) g	At-Completion Variance h = g - e
<b>Antioch Bridge</b>						
Capital Outlay Support	-	39.0	39.0	9.4	31.0	(8.0)
Capital Outlay Support by BATA				6.2		
Capital Outlay Construction	-	156.0	156.0	-	70.0	(86.0)
<b>Total</b>	-	195.0	195.0	15.6	101.0	(94.0)
<b>Dumbarton Bridge</b>						
Capital Outlay Support	-	95.0	95.0	15.6	103.1	8.1
Capital Outlay Support by BATA				6.0		
Capital Outlay Construction	-	270.0	270.0	0.3	171.9	(98.1)
<b>Total</b>	-	365.0	365.0	21.9	275.0	(90.0)
<b>Subtotal Capital Outlay Support</b>	<b>1,433.1</b>	<b>124.0</b>	<b>1,557.1</b>	<b>1,346.9</b>	<b>1,861.1</b>	<b>304.0</b>
<b>Subtotal Capital Outlay</b>	<b>6,286.8</b>	<b>581.0</b>	<b>6,867.8</b>	<b>5,033.7</b>	<b>6,899.0</b>	<b>31.2</b>
<b>Subtotal Other Budgeted Capital</b>	<b>35.1</b>	<b>(3.3)</b>	<b>31.8</b>	<b>0.7</b>	<b>7.7</b>	<b>(24.1)</b>
<b>Miscellaneous Program Costs</b>	<b>30.0</b>	<b>-</b>	<b>30.0</b>	<b>24.8</b>	<b>30.0</b>	<b>-</b>
<b>Subtotal Toll Bridge Seismic Retrofit Program</b>	<b>7,785.0</b>	<b>701.7</b>	<b>8,486.7</b>	<b>6,406.1</b>	<b>8,797.8</b>	<b>311.1</b>
<b>Programmatic Risk</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>78.0</b>	<b>78.0</b>
<b>Program Contingency</b>	<b>900.0</b>	<b>48.3</b>	<b>948.3</b>	<b>-</b>	<b>422.2</b>	<b>(526.1)</b>
<b>Total Toll Bridge Seismic Retrofit Program</b>	<b>8,685.0</b>	<b>750.0</b>	<b>9,435.0</b>	<b>6,406.1</b>	<b>9,298.0</b>	<b>(137.0)</b>

## Appendix A-2: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through May 31, 2010 (\$ Millions)

Bridge	AB 144 Baseline Budget	TBPOC Current Approved Budget	Encumbrances as of May 2010 See Note (1)	not yet Spent or Encumbered as of May 2010	Total Forecast as of May 2010
a	b	c	d	e	f = d + e
Other Completed Projects					
Capital Outlay Support	144.9	144.9	144.6	0.2	144.8
Capital Outlay	472.6	472.6	472.6	0.1	472.7
Total	617.5	617.5	617.2	0.3	617.5
Richmond-San Rafael					
Capital Outlay Support	134.0	127.0	126.7	0.3	127.0
Capital Outlay	698.0	689.5	674.1	15.4	689.5
Project Reserves	82.0	-	-	-	-
Total	914.0	816.5	800.8	15.7	816.5
West Span Retrofit					
Capital Outlay Support	75.0	75.0	74.8	0.2	75.0
Capital Outlay	232.9	232.9	232.8	(5.3)	227.5
Total	307.9	307.9	307.6	(5.1)	302.5
West Approach					
Capital Outlay Support	120.0	117.0	118.2	(0.2)	118.0
Capital Outlay	309.0	350.7	342.5	(4.4)	338.1
Total	429.0	467.7	460.7	(4.6)	456.1
SFOBB East Span -Skyway					
Capital Outlay Support	197.0	181.2	181.3	(0.1)	181.2
Capital Outlay	1,293.0	1,254.1	1,368.3	(114.2)	1,254.1
Total	1,490.0	1,435.3	1,549.6	(114.3)	1,435.3
SFOBB East Span -SAS- Superstructure					
Capital Outlay Support	214.6	214.6	232.5	227.5	460.0
Capital Outlay	1,753.7	1,753.7	1,753.7	237.7	1,991.4
Total	1,968.3	1,968.3	1,986.2	465.2	2,451.4
SFOBB East Span -SAS- Foundations					
Capital Outlay Support	62.5	37.6	37.6	-	37.6
Capital Outlay	339.9	307.3	308.7	(1.4)	307.3
Total	402.4	344.9	346.3	(1.4)	344.9
Small YBI Projects					
Capital Outlay Support	10.6	10.6	10.2	0.4	10.6
Capital Outlay	15.6	15.6	16.6	(0.9)	15.7
Total	26.2	26.2	26.8	(0.5)	26.3
YBI Detour					
Capital Outlay Support	29.5	84.5	82.9	6.3	89.2
Capital Outlay	131.9	492.9	493.0	(6.7)	486.3
Total	161.4	577.4	575.9	(0.4)	575.5
YBI - Transition Structures					
Capital Outlay Support	78.7	78.8	16.4	103.6	120.0
Capital Outlay	299.4	206.3	125.9	94.3	220.2
Total	378.1	285.1	142.3	197.9	340.2

Note: Details may not sum to totals due to rounding effects.

## Appendix A-2: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through May 31, 2010 (\$ Millions) Cont.

Bridge	AB 144 Baseline Budget	TBPOC Current Approved Budget	Expenditures to date and Encumbrances as of May 2010 See Note (1)	Estimated Cost not yet Spent or Encumbered as of May 2010	Total Forecast as of May 2010
a	b	c	d	e	f = d + e
<b>Oakland Touchdown</b>					
Capital Outlay Support	74.4	84.6	76.3	18.9	95.2
Capital Outlay	283.8	288.0	218.0	65.0	283.0
Total	353.2	372.6	294.3	83.9	378.2
<b>East Span Other Small Project</b>					
Capital Outlay Support	212.3	206.5	213.0	(6.4)	206.6
Capital Outlay	170.8	170.8	94.0	52.6	146.6
Total	383.1	377.3	307.0	46.2	353.2
<b>Existing Bridge Demolition</b>					
Capital Outlay Support	79.7	60.9	0.4	61.4	61.8
Capital Outlay	239.2	239.1	-	232.4	232.4
Total	318.9	300.0	0.4	293.8	294.2
<b>Antioch Bridge</b>					
Capital Outlay Support	-	39.0	9.6	15.2	24.8
Capital Outlay Support by BATA	-	-	6.2	-	6.2
Capital Outlay	-	156.0	47.0	23.0	70.0
Total	-	195.0	62.8	38.2	101.0
<b>Dumbarton Bridge</b>					
Capital Outlay Support	-	95.0	15.6	81.5	97.1
Capital Outlay Support by BATA	-	-	6.0	-	6.0
Capital Outlay	-	270.0	0.3	171.6	171.9
Total	-	365.0	21.9	253.1	275.0
<b>Miscellaneous Program Costs</b>	<b>30.0</b>	<b>30.0</b>	<b>25.2</b>	<b>4.8</b>	<b>30.0</b>
<b>Total Capital Outlay Support (2)</b>	<b>1,463.2</b>	<b>1,587.2</b>	<b>1,377.5</b>	<b>513.6</b>	<b>1,891.1</b>
<b>Total Capital Outlay</b>	<b>6,321.8</b>	<b>6,899.5</b>	<b>6,147.5</b>	<b>759.2</b>	<b>6,906.7</b>
<b>Program Total</b>	<b>7,785.0</b>	<b>8,486.7</b>	<b>7,525.0</b>	<b>1,272.8</b>	<b>8,797.8</b>

(1). Funds allocated to project or contract for Capital Outlay and Support needs includes Capital Outlay Support total allocation for FY 06/07.

(2). BSA provided a distribution of program contingency in December 2004 based on Bechtel Infrastructure Corporation input.

This column is subject to revision upon completion of Department's risk assessment update.

(3). Total Capital Outlay Support includes program indirect costs.

Note: Details may not sum to totals due to rounding effects.



## Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through May 31, 2010 (\$ Millions)

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (05/2010)	Cost To Date (05/2010)	Cost Forecast (05/2010)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
<b>San Francisco-Oakland Bay Bridge East Span Replacement Project</b>						
<b>East Span - SAS Superstructure</b>						
Capital Outlay Support	214.6	-	214.6	230.0	460.0	245.4
Capital Outlay Construction	1,753.7	-	1,753.7	1,021.3	1,991.4	237.7
<b>Total</b>	<b>1,968.3</b>	<b>-</b>	<b>1,968.3</b>	<b>1,251.3</b>	<b>2,451.4</b>	<b>483.1</b>
<b>SAS W2 Foundations</b>						
Capital Outlay Support	10.0	(0.8)	9.2	9.2	9.2	-
Capital Outlay Construction	26.4	-	26.4	25.8	26.4	-
<b>Total</b>	<b>36.4</b>	<b>(0.8)</b>	<b>35.6</b>	<b>35.0</b>	<b>35.6</b>	<b>-</b>
<b>YBI South/South Detour</b>						
Capital Outlay Support	29.4	55.1	84.5	82.3	89.2	4.7
Capital Outlay Construction	132.0	360.9	492.9	436.5	486.3	(6.6)
<b>Total</b>	<b>161.4</b>	<b>416.0</b>	<b>577.4</b>	<b>518.8</b>	<b>575.5</b>	<b>(1.9)</b>
<b>East Span - Skyway</b>						
Capital Outlay Support	197.0	(15.8)	181.2	181.2	181.2	-
Capital Outlay Construction	1,293.0	(38.9)	1,254.1	1,236.9	1,254.1	-
<b>Total</b>	<b>1,490.0</b>	<b>(54.7)</b>	<b>1,435.3</b>	<b>1,418.1</b>	<b>1,435.3</b>	<b>-</b>
<b>East Span - SAS E2/T1 Foundations</b>						
Capital Outlay Support	52.5	(24.1)	28.4	28.4	28.4	-
Capital Outlay Construction	313.5	(32.6)	280.9	274.8	280.9	-
<b>Total</b>	<b>366.0</b>	<b>(56.7)</b>	<b>309.3</b>	<b>303.2</b>	<b>309.3</b>	<b>-</b>
<b>YBI Transition Structures (see notes below)</b>						
Capital Outlay Support	78.7	0.1	78.8	31.5	120.0	41.2
Capital Outlay Construction	299.3	(93.0)	206.3	4.7	220.2	13.9
<b>Total</b>	<b>378.0</b>	<b>(92.9)</b>	<b>285.1</b>	<b>36.2</b>	<b>340.2</b>	<b>55.1</b>
<b>* YBI- Transition Structures Prior-to-Split Costs</b>						
Capital Outlay Support			16.7	16.4	16.5	(0.2)
Capital Outlay Construction			-	-	-	-
<b>Total</b>			<b>16.7</b>	<b>16.4</b>	<b>16.5</b>	<b>(0.2)</b>
<b>* YBI- Transition Structures Contract No. 1</b>						
Capital Outlay Support			45.1	10.6	69.7	24.7
Capital Outlay Construction			144.0	4.7	156.9	12.9
<b>Total</b>			<b>189.1</b>	<b>15.2</b>	<b>226.6</b>	<b>37.6</b>
<b>* YBI- Transition Structures Contract No. 2</b>						
Capital Outlay Support			16.0	4.5	32.8	16.8
Capital Outlay Construction			59.0	-	60.0	1.0
<b>Total</b>			<b>75.0</b>	<b>4.5</b>	<b>92.8</b>	<b>17.8</b>
<b>* YBI- Transition Structures Contract No. 3 Landscape</b>						
Capital Outlay Support			1.0	-	1.0	-
Capital Outlay Construction			3.3	-	3.3	-
<b>Total</b>			<b>4.3</b>	<b>-</b>	<b>4.3</b>	<b>-</b>

Note: Details may not sum to totals due to rounding effects.



## Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through May 31, 2010 (\$ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (05/2010)	Cost To Date (05/2010)	Cost Forecast (05/2010)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
<b>Oakland Touchdown (see notes below)</b>						
Capital Outlay Support	74.4	10.2	84.6	75.2	95.2	10.6
Capital Outlay Construction	283.8	4.2	288.0	207.5	283.0	(5.0)
<b>Total</b>	<b>358.2</b>	<b>14.4</b>	<b>372.6</b>	<b>282.7</b>	<b>378.2</b>	<b>5.6</b>
<b>* OTD Prior-to-Split Costs</b>						
Capital Outlay Support			21.0	20.1	21.7	0.7
Capital Outlay Construction			-	-	-	-
<b>Total</b>			<b>21.0</b>	<b>20.1</b>	<b>21.7</b>	<b>0.7</b>
<b>* OTD Submarine Cable</b>						
Capital Outlay Support			0.9	0.9	0.9	-
Capital Outlay Construction			9.6	7.9	9.6	-
<b>Total</b>			<b>10.5</b>	<b>8.8</b>	<b>10.5</b>	<b>-</b>
<b>* OTD No. 1 (Westbound)</b>						
Capital Outlay Support			45.5	46.7	47.6	2.1
Capital Outlay Construction			212.0	199.6	211.2	(0.8)
<b>Total</b>			<b>257.5</b>	<b>246.3</b>	<b>258.8</b>	<b>1.3</b>
<b>* OTD No. 2 (Eastbound)</b>						
Capital Outlay Support			15.8	6.8	23.5	7.7
Capital Outlay Construction			62.0	-	57.8	(4.2)
<b>Total</b>			<b>77.8</b>	<b>6.8</b>	<b>81.3</b>	<b>3.5</b>
<b>* OTD Electrical Systems</b>						
Capital Outlay Support			1.4	0.8	1.5	0.1
Capital Outlay Construction			4.4	-	4.4	-
<b>Total</b>			<b>5.8</b>	<b>0.8</b>	<b>5.9</b>	<b>0.1</b>
<b>Existing Bridge Demolition</b>						
Capital Outlay Support	79.7	(18.8)	60.9	0.4	61.8	0.9
Capital Outlay Construction	239.2	(0.1)	239.1	-	232.4	(6.7)
<b>Total</b>	<b>318.9</b>	<b>(18.9)</b>	<b>300.0</b>	<b>0.4</b>	<b>294.2</b>	<b>(5.8)</b>
<b>YBI/SAS Archeology</b>						
Capital Outlay Support	1.1	-	1.1	1.1	1.1	-
Capital Outlay Construction	1.1	-	1.1	1.1	1.1	-
<b>Total</b>	<b>2.2</b>	<b>-</b>	<b>2.2</b>	<b>2.2</b>	<b>2.2</b>	<b>-</b>
<b>YBI - USCG Road Relocation</b>						
Capital Outlay Support	3.0	-	3.0	2.7	3.0	-
Capital Outlay Construction	3.0	-	3.0	2.8	3.0	-
<b>Total</b>	<b>6.0</b>	<b>-</b>	<b>6.0</b>	<b>5.5</b>	<b>6.0</b>	<b>-</b>
<b>YBI - Substation and Viaduct</b>						
Capital Outlay Support	6.5	-	6.5	6.4	6.5	-
Capital Outlay Construction	11.6	-	11.6	11.3	11.6	-
<b>Total</b>	<b>18.1</b>	<b>-</b>	<b>18.1</b>	<b>17.7</b>	<b>18.1</b>	<b>-</b>
<b>Oakland Geofill</b>						
Capital Outlay Support	2.5	-	2.5	2.5	2.5	-
Capital Outlay Construction	8.2	-	8.2	8.2	8.2	-
<b>Total</b>	<b>10.7</b>	<b>-</b>	<b>10.7</b>	<b>10.7</b>	<b>10.7</b>	<b>-</b>

Note: Details may not sum to totals due to rounding effects.

## Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through May 31, 2010 (\$ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (05/2010)	Cost To Date (05/2010)	Cost Forecast (05/2010)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
<b>Pile Installation Demonstration Project</b>						
Capital Outlay Support	1.8	-	1.8	1.8	1.8	-
Capital Outlay Construction	9.2	-	9.2	9.2	9.2	-
<b>Total</b>	<b>11.0</b>	<b>-</b>	<b>11.0</b>	<b>11.0</b>	<b>11.0</b>	<b>-</b>
<b>Stormwater Treatment Measures</b>						
Capital Outlay Support	6.0	2.2	8.2	8.1	8.2	-
Capital Outlay Construction	15.0	3.3	18.3	16.7	18.3	-
<b>Total</b>	<b>21.0</b>	<b>5.5</b>	<b>26.5</b>	<b>24.8</b>	<b>26.5</b>	<b>-</b>
<b>Right-of-Way and Environmental Mitigation</b>						
Capital Outlay Support	-	-	-	-	-	-
Capital Outlay & Right-of-Way	72.4	-	72.4	51.2	72.4	-
<b>Total</b>	<b>72.4</b>	<b>-</b>	<b>72.4</b>	<b>51.2</b>	<b>72.4</b>	<b>-</b>
<b>Sunk Cost - Existing East Span Retrofit</b>						
Capital Outlay Support	39.5	-	39.5	39.5	39.5	-
Capital Outlay Construction	30.8	-	30.8	30.8	30.8	-
<b>Total</b>	<b>70.3</b>	<b>-</b>	<b>70.3</b>	<b>70.3</b>	<b>70.3</b>	<b>-</b>
<b>Other Capital Outlay Support</b>						
Environmental Phase	97.7	-	97.7	97.7	97.7	-
Pre-Split Project Expenditures	44.9	-	44.9	44.9	44.9	-
Non-project Specific Costs	20.0	(8.0)	12.0	3.2	12.0	-
<b>Total</b>	<b>162.6</b>	<b>(8.0)</b>	<b>154.6</b>	<b>145.8</b>	<b>154.6</b>	<b>-</b>
<b>Subtotal Capital Outlay Support</b>	<b>959.3</b>	<b>-</b>	<b>959.3</b>	<b>846.1</b>	<b>1,262.2</b>	<b>302.9</b>
<b>Subtotal Capital Outlay Construction</b>	<b>4,492.2</b>	<b>203.8</b>	<b>4,696.0</b>	<b>3,338.8</b>	<b>4,929.3</b>	<b>233.3</b>
<b>Other Budgeted Capital</b>	<b>35.1</b>	<b>(3.3)</b>	<b>31.8</b>	<b>0.7</b>	<b>7.7</b>	<b>(24.1)</b>
<b>Total SFOBB East Span Replacement Project</b>	<b>5,486.6</b>	<b>200.5</b>	<b>5,687.1</b>	<b>4,185.6</b>	<b>6,199.2</b>	<b>512.1</b>

Note: Details may not sum to totals due to rounding effects.

## Appendix C: Regional Measure 1 Program Cost Detail (\$ Millions)

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (05/2010)	Cost To Date (05/2010)	Cost Forecast (05/2010)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
<b>New Benicia-Martinez Bridge Project</b>						
<b>New Bridge</b>						
Capital Outlay Support						
BATA Funding	84.9	6.9	91.8	91.8	91.8	-
Non-BATA Funding	-	0.1	0.1	0.1	0.1	-
Subtotal	84.9	7.0	91.9	91.9	91.9	-
Capital Outlay Construction						
BATA Funding	661.9	94.6	756.5	753.8	756.5	-
Non-BATA Funding	10.1	-	10.1	10.1	10.1	-
Subtotal	672.0	94.6	766.6	763.9	766.6	-
Total	756.9	101.6	858.5	855.8	858.5	-
<b>I-680/I-780 Interchange Reconstruction</b>						
Capital Outlay Support						
BATA Funding	24.9	5.2	30.1	30.1	30.1	-
Non-BATA Funding	1.4	5.2	6.6	6.3	6.6	-
Subtotal	26.3	10.4	36.7	36.4	36.7	-
Capital Outlay Construction						
BATA Funding	54.7	26.9	81.6	77.1	81.6	-
Non-BATA Funding	21.6	-	21.6	21.7	21.7	0.1
Subtotal	76.3	26.9	103.2	98.8	103.3	0.1
Total	102.6	37.3	139.9	135.2	140.0	0.1
<b>I-680/Marina Vista Interchange Reconstruction</b>						
Capital Outlay Support	18.3	1.8	20.1	20.2	20.2	0.1
Capital Outlay Construction	51.5	4.9	56.4	56.1	56.4	-
Total	69.8	6.7	76.5	76.3	76.6	0.1
<b>New Toll Plaza and Administration Building</b>						
Capital Outlay Support	11.9	3.8	15.7	15.7	15.7	-
Capital Outlay Construction	24.3	2.0	26.3	25.1	26.3	-
Total	36.2	5.8	42.0	40.8	42.0	-
<b>Existing Bridge &amp; Interchange Modifications</b>						
Capital Outlay Support						
BATA Funding	4.3	13.5	17.8	17.8	17.8	-
Non-BATA Funding	-	0.9	0.9	0.8	0.9	-
Subtotal	4.3	14.4	18.7	18.6	18.7	-
Capital Outlay Construction						
BATA Funding	17.2	32.8	50.0	37.1	50.0	-
Non-BATA Funding	-	9.5	9.5	-	9.5	-
Subtotal	17.2	42.3	59.5	37.1	59.5	-
Total	21.5	56.7	78.2	55.7	78.2	-
<b>Other Contracts</b>						
Capital Outlay Support	11.4	(2.3)	9.1	9.1	9.1	-
Capital Outlay Construction	20.3	3.3	23.6	17.8	23.6	-
Capital Outlay Right-of-Way	20.4	(0.1)	20.3	17.0	20.3	-
Total	52.1	0.9	53.0	43.9	53.0	-

Note: Details may not sum to totals due to rounding effects.



## Appendix C: Regional Measure 1 Program Cost Detail (\$ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (05/2010)	Cost To Date (05/2010)	Cost Forecast (05/2010)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
New Benicia-Martinez Bridge Project continued...						
Subtotal BATA Capital Outlay Support	155.7	28.9	184.6	184.7	184.7	0.1
Subtotal BATA Capital Outlay Construction	829.9	164.5	994.4	967.0	994.4	-
Subtotal Capital Outlay Right-of-Way	20.4	(0.1)	20.3	17.0	20.3	-
Subtotal Non-BATA Capital Outlay Support	1.4	6.2	7.6	7.2	7.6	-
Subtotal Non-BATA Capital Outlay Construction	31.7	9.5	41.2	31.8	41.3	0.1
Project Reserves	20.8	3.6	24.4	-	24.2	(0.2)
Total New Benicia-Martinez Bridge Project	1,059.9	212.6	1,272.5	1,207.7	1,272.5	-
Notes:	Includes EA's 00601_,00603_,00605_,00606_, 00608_, 00609_, 0060A_, 0060C_, 0060E_, 0060F_, 0060G_, and 0060H_ and all Project Right-of-Way					
Carquinez Bridge Replacement Project						
New Bridge						
Capital Outlay Support	60.5	(0.3)	60.2	60.2	60.2	-
Capital Outlay Construction	253.3	2.7	256.0	255.9	256.0	-
Total	313.8	2.4	316.2	316.1	316.2	-
Crockett Interchange Reconstruction						
Capital Outlay Support	32.0	(0.1)	31.9	31.9	31.9	-
Capital Outlay Construction	73.9	(1.9)	72.0	71.9	72.0	-
Total	105.9	(2.0)	103.9	103.8	103.9	-
Existing 1927 Bridge Demolition						
Capital Outlay Support	16.1	(0.5)	15.6	15.7	15.7	0.1
Capital Outlay Construction	35.2	-	35.2	34.8	35.2	-
Total	51.3	(0.5)	50.8	50.5	50.9	0.1
Other Contracts						
Capital Outlay Support	15.8	1.2	17.0	16.3	17.0	-
Capital Outlay Construction	18.8	(1.2)	17.6	16.3	17.6	-
Capital Outlay Right-of-Way	10.5	(0.1)	10.4	9.9	10.4	-
Total	45.1	(0.1)	45.0	42.5	45.0	-
Subtotal BATA Capital Outlay Support	124.4	0.3	124.7	124.1	124.8	0.1
Subtotal BATA Capital Outlay Construction	381.2	(0.4)	380.8	378.9	380.8	-
Subtotal Capital Outlay Right-of-Way	10.5	(0.1)	10.4	9.9	10.4	-
Project Reserves	12.1	(9.8)	2.3	-	2.2	(0.1)
Total Carquinez Bridge Replacement Project	528.2	(10.0)	518.2	512.9	518.2	-
Notes:	Other Contracts includes EA's 01301_,01302_, 01303_, 01304_,01305_, 01306_, 01307_, 01308_, 01309_,0130A_, 0130C_, 0130D_, 0130F_, 0130G_, 0130H_, 0130J_, 00453_, 00493_, 04700_, 00607_, 2A270_, and 29920_ and all Project Right-of-Way					

Note: Details may not sum to totals due to rounding effects.



## Appendix C: Regional Measure 1 Program Cost Detail (\$ Millions) Cont.

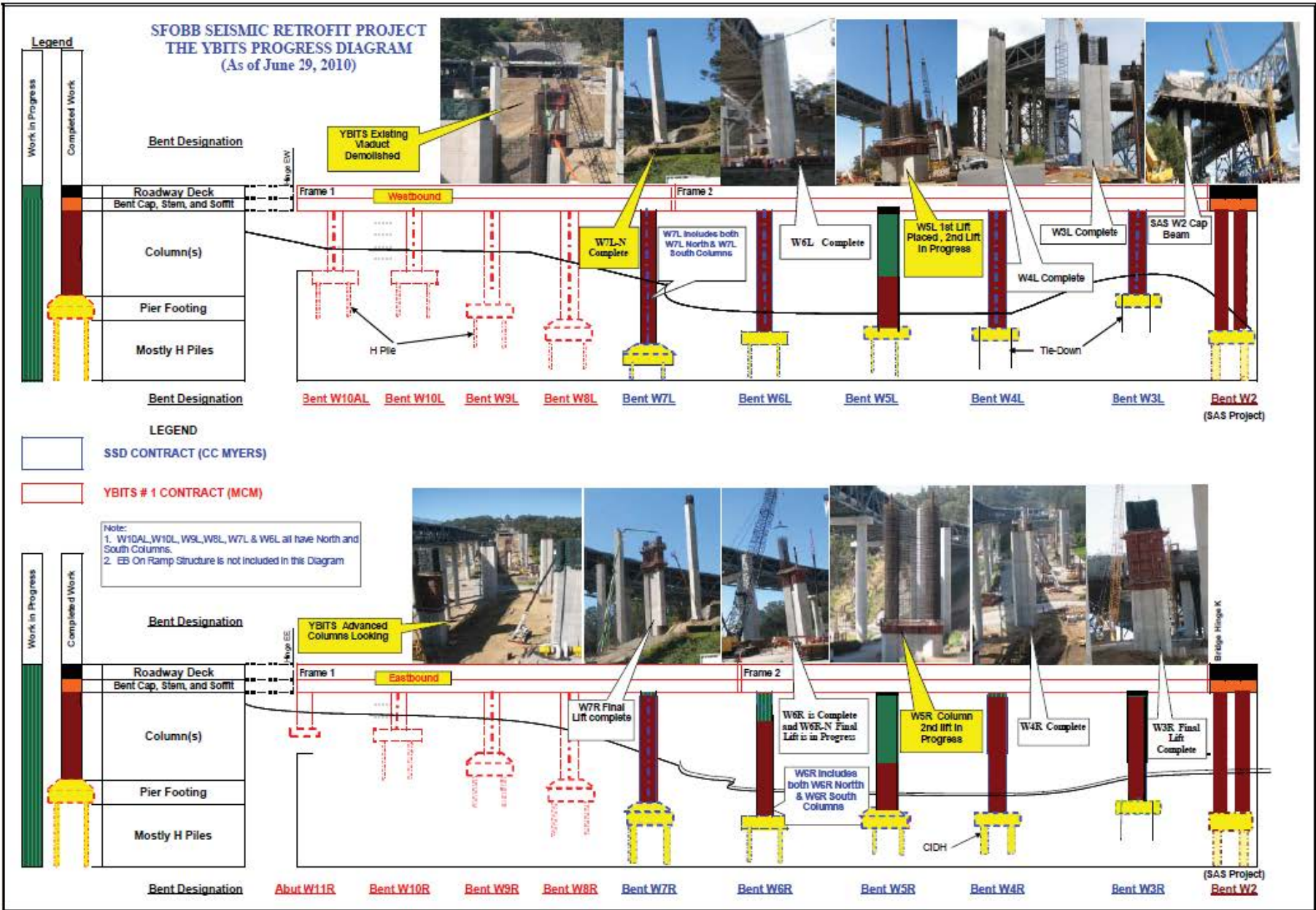
Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (05/2010)	Cost To Date (05/2010)	Cost Forecast (05/2010)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
<b>Richmond-San Rafael Bridge Trestle, Fender, and Deck Joint Rehabilitation</b> See note ' below						
Capital Outlay Support						
BATA Funding	2.2	(0.8)	1.4	1.4	1.4	-
Non-BATA Funding	8.6	1.8	10.4	10.4	10.4	-
Subtotal	10.8	1.0	11.8	11.8	11.8	-
Capital Outlay Construction						
BATA Funding	40.2	(6.8)	33.4	33.3	33.4	-
Non-BATA Funding	51.1	-	51.1	51.1	51.1	-
Subtotal	91.3	(6.8)	84.5	84.4	84.5	-
Project Reserves	-	0.8	0.8	-	0.8	-
<b>Total</b>	<b>102.1</b>	<b>(5.0)</b>	<b>97.1</b>	<b>96.2</b>	<b>97.1</b>	<b>-</b>
<b>Richmond-San Rafael Bridge Deck Overlay Rehabilitation</b>						
Capital Outlay Support						
BATA Funding	4.0	(0.7)	3.3	3.3	3.3	-
Non-BATA Funding	4.0	(4.0)	-	-	-	-
Subtotal	8.0	(4.7)	3.3	3.3	3.3	-
Capital Outlay Construction	16.9	(0.6)	16.3	16.3	16.3	-
Project Reserves	0.1	0.3	0.4	-	0.4	-
<b>Total</b>	<b>25.0</b>	<b>(5.0)</b>	<b>20.0</b>	<b>19.6</b>	<b>20.0</b>	<b>-</b>
<b>Richmond Parkway Project (RM 1 Share Only)</b>						
Capital Outlay Support	-	-	-	-	-	-
Capital Outlay Construction	5.9	-	5.9	4.3	5.9	-
<b>Total</b>	<b>5.9</b>	<b>-</b>	<b>5.9</b>	<b>4.3</b>	<b>5.9</b>	<b>-</b>
<b>San Mateo-Hayward Bridge Widening</b>						
Capital Outlay Support	34.6	(0.5)	34.1	34.1	34.1	-
Capital Outlay Construction	180.2	(6.1)	174.1	174.1	174.1	-
Capital Outlay Right-of-Way	1.5	(0.9)	0.6	0.5	0.6	-
Project Reserves	1.5	(0.5)	1.0	-	1.0	-
<b>Total</b>	<b>217.8</b>	<b>(8.0)</b>	<b>209.8</b>	<b>208.7</b>	<b>209.8</b>	<b>-</b>
<b>I-880/SR-92 Interchange Reconstruction</b>						
Capital Outlay Support	28.8	34.6	63.4	53.6	63.4	-
Capital Outlay Construction						
BATA Funding	85.2	66.2	151.4	95.0	151.4	-
Non-BATA Funding	9.6	-	9.6	-	9.6	-
Subtotal	94.8	66.2	161.0	95.0	161.0	-
Capital Outlay Right-of-Way	9.9	7.0	16.9	12.3	16.9	-
Project Reserves	0.3	3.4	3.7	-	3.7	-
<b>Total</b>	<b>133.8</b>	<b>111.2</b>	<b>245.0</b>	<b>160.9</b>	<b>245.0</b>	<b>-</b>
<b>Bayfront Expressway Widening</b>						
Capital Outlay Support	8.6	(0.2)	8.4	8.3	8.4	-
Capital Outlay Construction	26.5	(1.5)	25.0	24.9	25.0	-
Capital Outlay Right-of-Way	0.2	-	0.2	0.2	0.2	-
Project Reserves	0.8	(0.3)	0.5	-	0.5	-
<b>Total</b>	<b>36.1</b>	<b>(2.0)</b>	<b>34.1</b>	<b>33.4</b>	<b>34.1</b>	<b>-</b>

Note: Details may not sum to totals due to rounding effects.

## Appendix C: Regional Measure 1 Program Cost Detail (\$ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (05/2010)	Cost To Date (05/2010)	Cost Forecast (05/2010)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
<b>US 101/University Avenue Interchange Modification</b>						
Capital Outlay Support	-	-	-	-	-	-
Capital Outlay Construction	3.8	-	3.8	3.7	3.8	-
<b>Total</b>	<b>3.8</b>	<b>-</b>	<b>3.8</b>	<b>3.7</b>	<b>3.8</b>	<b>-</b>
Subtotal BATA Capital Outlay Support	358.3	61.6	419.9	409.5	420.1	0.2
Subtotal BATA Capital Outlay Construction	1,569.8	215.3	1,785.1	1,697.5	1,785.1	-
Subtotal Capital Outlay Right-of-Way	42.5	5.9	48.4	39.9	48.4	-
Subtotal Non-BATA Capital Outlay Support	14.0	4.0	18.0	17.6	18.0	-
Subtotal Non-BATA Capital Outlay Construction	92.4	9.5	101.9	82.9	102.0	0.1
Project Reserves	35.6	(2.5)	33.1	-	32.8	(0.3)
<b>Total RM1 Program</b>	<b>2,112.6</b>	<b>293.8</b>	<b>2,406.4</b>	<b>2,247.4</b>	<b>2,406.4</b>	<b>-</b>
<b>Notes:</b>						
1 Richmond-San Rafael Bridge Trestle, Fender, and Deck Joint Rehabilitation Includes Non-TBSRA Expenses for EA 0438U_ and 04157_						
2 San Mateo-Hayward Bridge Widening Includes EA's 00305_, 04501_, 04502_, 04503_, 04504_, 04505_, 04506_, 04507_, 04508_, 04509_, 27740_, 27790_, 04860_						

Note: Details may not sum to totals due to rounding effects.





## Appendix E: Project Progress Photographs

### Yerba Buena Island Detour Existing Bridge Demolition



Demolition of Existing Bridge on the Left and the New Temporary Detour on the Right





Demolition of the Existing Bridge and in the foreground, YBITS Columns



Demolition of a Foundation Bent of the Existing Bridge



## Appendix F: Project Progress Photographs

### Self-Anchored Suspension Bridge Fabrication



First Tower Boxes Loaded onto the Transport Ship



First Tower Boxes Loaded onto the Transport Ship



Four Tower Boxes Being Loaded for Shipment



First of the Tower Boxes Being Loaded onto the Ship



## Appendix F: Project Progress Photographs

### Self-Anchored Suspension Bridge Fabrication (cont.)



Segments of Roadway Box 9 in Trial Assembly Yard



Roadway Box 8 with Crossbeam 9 and 10 and Roadway Box 7 Segments in Background





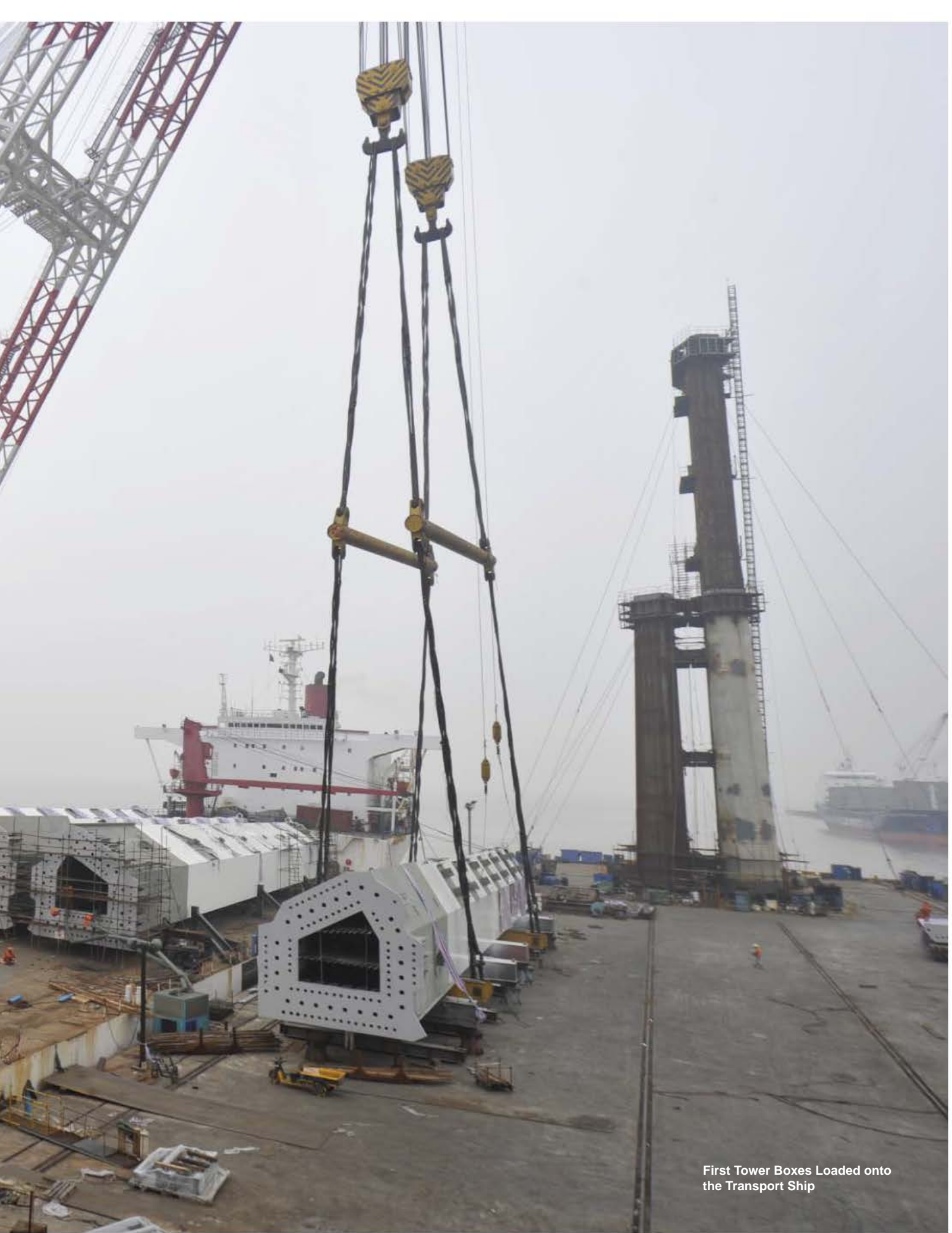
Roadway Box 9 in Trial Assembly Yard



Roadway Box 8 in Trial Assembly Yard







First Tower Boxes Loaded onto the Transport Ship

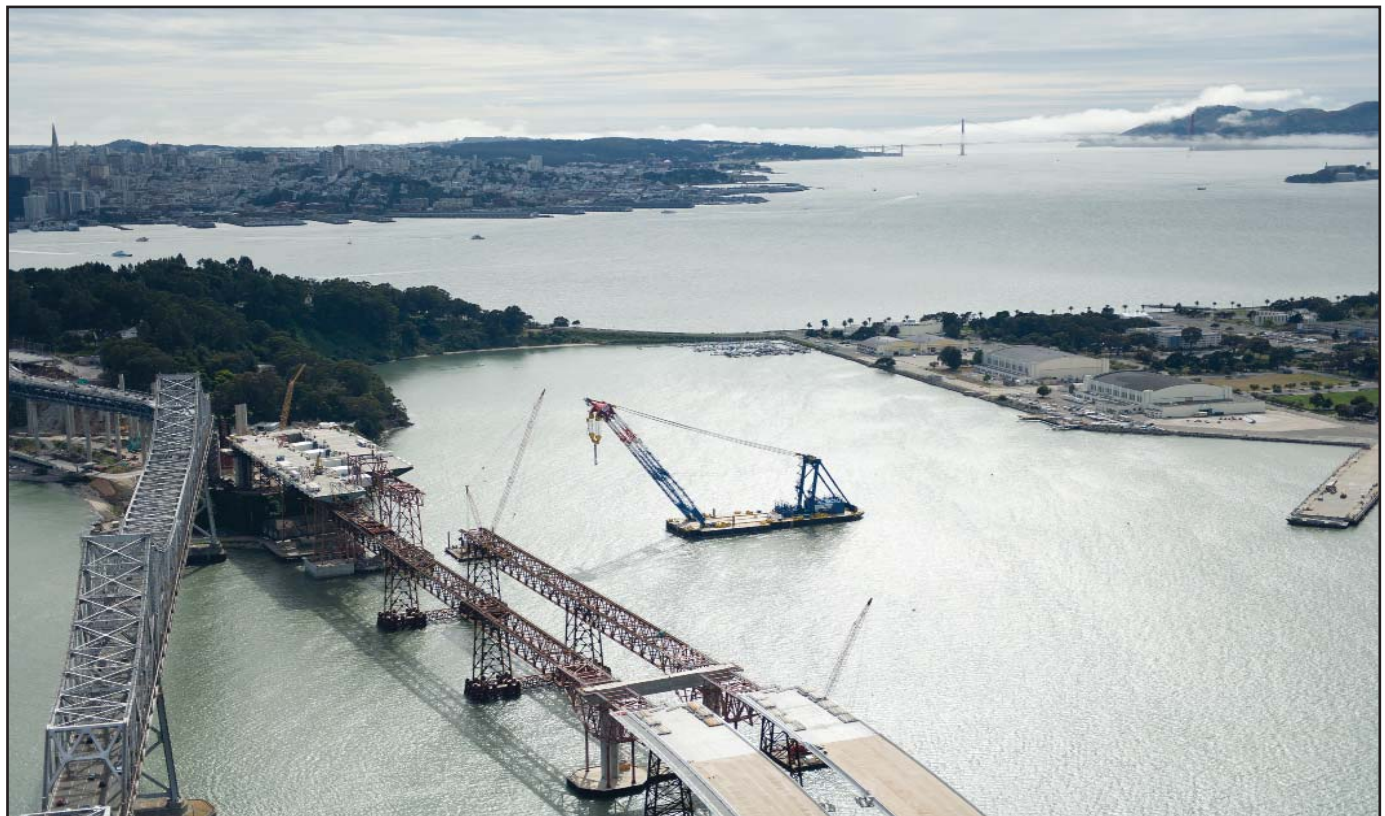


## Appendix F: Project Progress Photographs

### Self-Anchored Suspension Bridge Field Work

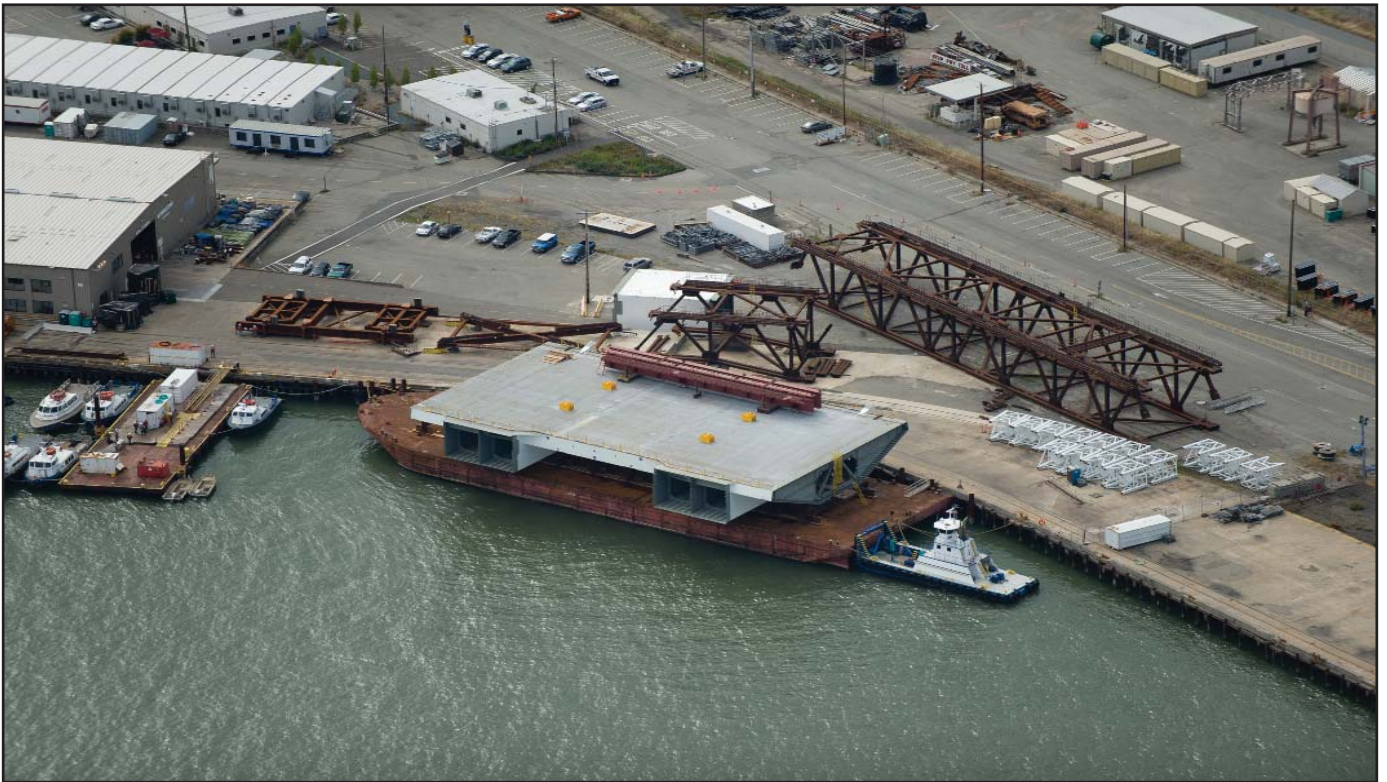


SAS Eastbound and Westbound Roadway Boxes Placed

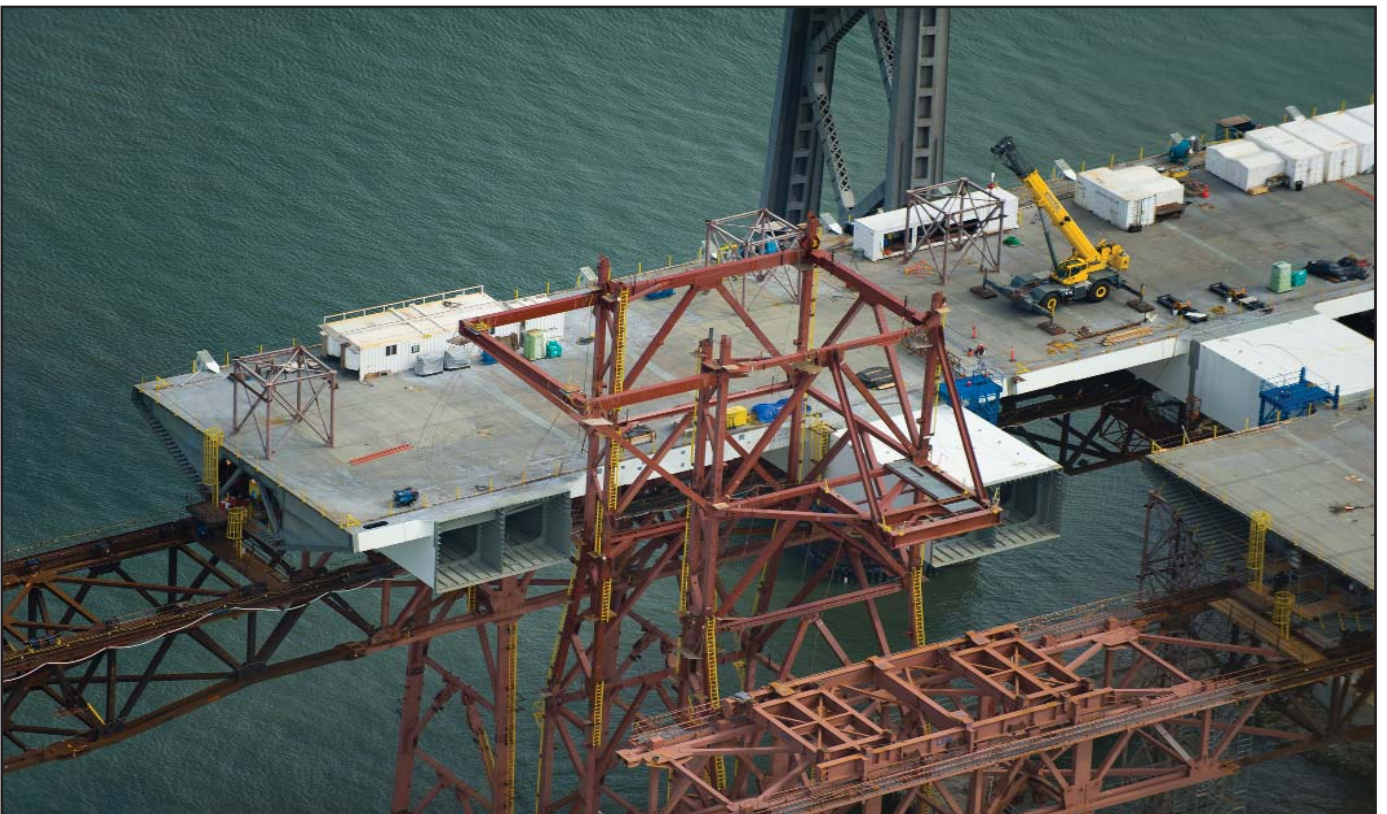


Overview of the SAS Construction Progress





SAS Sixth Westbound Roadway Box Ready to be Placed



T1 Erection Temporary Tower Framing Structure

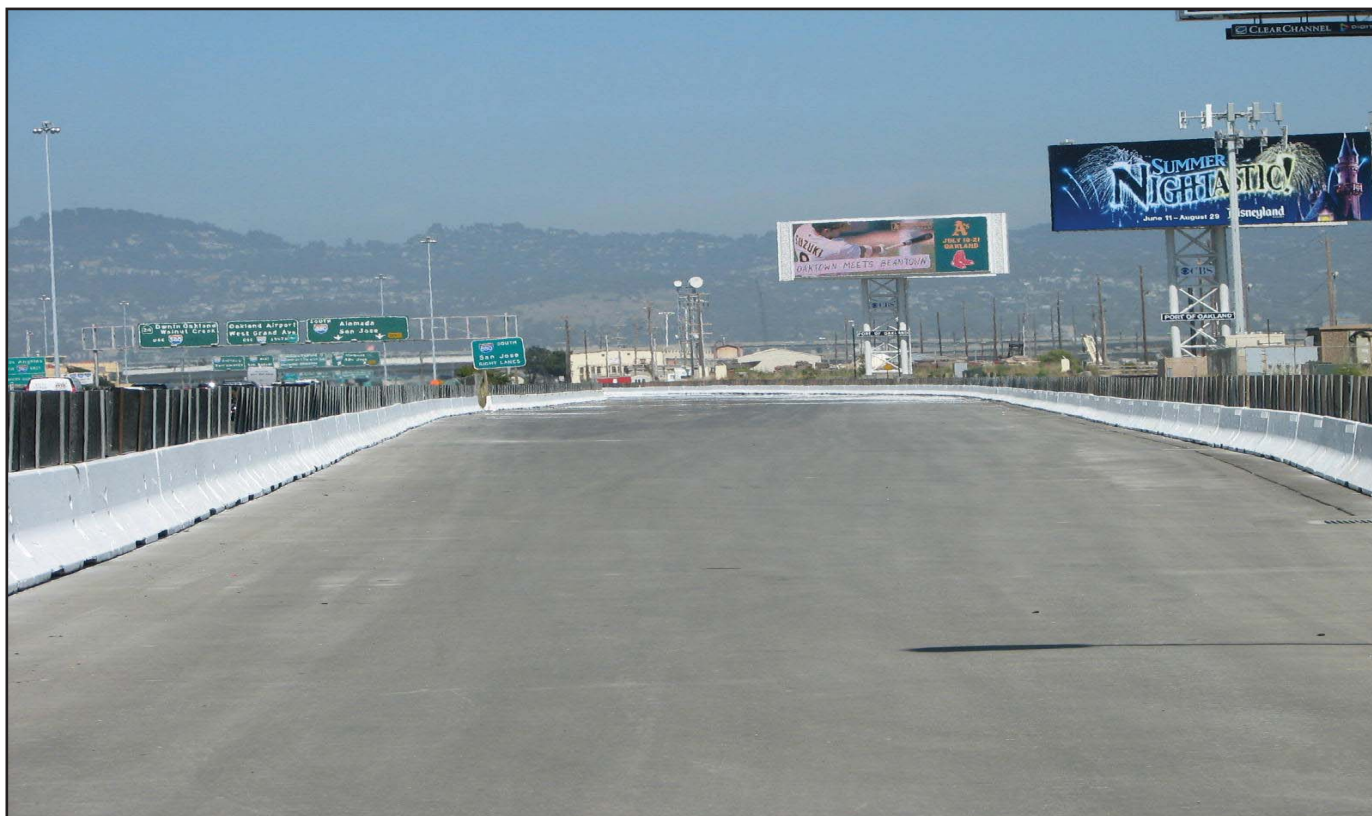


## Appendix F: Project Progress Photographs

### Oakland Touchdown



OTD #1 Temporary Access Road to Skyway from Oakland Touchdown



OTD #1 Eastbound Detour Road Completed





OTD #1 Mole Substation Completed



OTD #1 Service Platform and Equipment Completed



## Appendix F: Project Progress Photographs

### 92/880 Interchange



Overview of Pump Plant at the Southeast Quadrant of the 92/880 Interchange



Overview of 92/880 Interchange





## Appendix F: Project Progress Photographs

**AB144/SB 66 BUDGET:** The planned allocation of resources for the Toll Bridge Seismic Retrofit Program, or subordinate projects or contracts, as provided in Assembly Bill 144 and Senate Bill 66, signed into law by Governor Schwarzenegger on July 18, 2005 and September 29, 2005, respectively.

**BATA BUDGET:** The planned allocation of resources for the Regional Measure 1 Program, or subordinate projects or contracts as authorized by the Bay Area Toll Authority as of June 2005.

**APPROVED CHANGES:** For cost, changes to the AB144/SB 66 Budget or BATA Budget as approved by the Bay Area Toll Authority Commission. For schedule, changes to the AB 144/SB 66 Project Complete Baseline approved by the Toll Bridge Program Oversight Committee, or changes to the BATA Project Complete Baseline approved by the Bay Area Toll Authority Commission.

**CURRENT APPROVED BUDGET:** The sum of the AB144/SB66 Budget or BATA Budget and Approved Changes.

**COST TO DATE:** The actual expenditures incurred by the program, project or contract as of the month and year shown.

**COST FORECAST:** The current forecast of all of the costs that are projected to be expended so as to complete the given scope of the program, project, or contract.

**AT COMPLETION VARIANCE or VARIANCE (cost):** The mathematical difference between the Cost Forecast and the Current Approved Budget.

**AB 144/SB 66 PROJECT COMPLETE BASELINE:** The planned completion date for the Toll Bridge Seismic Retrofit Program or subordinate projects or contracts.

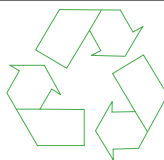
**BATA PROJECT COMPLETE BASELINE:** The planned completion date for the Regional Measure 1 Program or subordinate projects or contracts.

**PROJECT COMPLETE CURRENT APPROVED SCHEDULE:** The sum of the AB144/SB66 Project Complete Baseline or BATA Project Complete Baseline and Approved Changes.

**PROJECT COMPLETE SCHEDULE FORECAST:** The current projected date for the completion of the program, project, or contract.

**SCHEDULE VARIANCE or VARIANCE (schedule):** The mathematical difference expressed in months between the Project Complete Schedule Forecast and the Project Complete Current Approved Schedule.

**% COMPLETE:** % Complete is based on an evaluation of progress on the project, expenditures to date, and schedule.



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*The information in this report is provided in accordance with California Government code Section 755. This document is one of a series of reports prepared for the Bay Area Toll Authority (BATA)/Metropolitan Transportation Commission (MTC) for the Toll Bridge Seismic Retrofit and Regional Measure 1 Programs. The contract value for the monitoring efforts, technical analysis, and field site works that contribute to these reports, as well as the report preparation and production is \$1,574,873.73.*





## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** July 8, 2010

**FR:** Tony Anziano, Toll Bridge Program Manager, Caltrans

**RE:** Agenda No. - 4a1

Item- San Francisco-Oakland Bay Bridge Updates  
Yerba Buena Island Detour Update

---

**Recommendation:**

For Information Only

**Cost:**

N/A

**Schedule Impacts:**

N/A

**Discussion:**

A verbal update on the Yerba Buena Island Detour contract will be provided at the July 13<sup>th</sup> meeting.

**Attachment(s):**

N/A

## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee      **DATE:** July 8, 2010  
(TBPOC)

**FR:** Tony Anziano, Toll Bridge Program Manager, Caltrans

**RE:** Agenda No. - 4b1

Item- San Francisco-Oakland Bay Bridge Updates  
Yerba Buena Island Transition Structures No. 1 Update

---

**Recommendation:**

For Information Only

**Cost:**

N/A

**Schedule Impacts:**

N/A

**Discussion:**

A verbal update on the Yerba Buena Island Transition Structures No. 1 contract will be provided at the July 13<sup>th</sup> meeting.

**Attachment(s):**

N/A

## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** July 8, 2010

**FR:** Tony Anziano, Toll Bridge Program Manager, Caltrans

**RE:** Agenda No. - 4c1

Item- San Francisco-Oakland Bay Bridge Updates  
Oakland Touchdown No. 1 Update

---

**Recommendation:**

For Information Only

**Cost:**

N/A

**Schedule Impacts:**

N/A

**Discussion:**

A verbal update on the Oakland Touchdown No. 1 contract will be provided at the July 13<sup>th</sup> meeting.

**Attachment(s):**

N/A



## *Memorandum*

**TO:** Toll Bridge Oversight Committee (TBPOC)    **DATE:** July 9, 2010

**FR:** Tony Anziano, Toll Bridge Program Manager, Caltrans

**RE:** Agenda No. - 4d1  
Item                      San Francisco-Oakland Bay Bridge Updates  
                                 Mechanical, Electrical & Piping (MEP) - Bridge Lighting  
                                 Assembly Procurement Contract Addendum No. 1

---

**Recommendation:**  
**APPROVAL**

**Cost:**  
None

**Schedule Impacts:**  
None

**Discussion:**

In accordance with the Mechanical, Electrical & Piping (MEP) Integration Strategy memo which was approved by the TBPOC at the November 2008 meeting, BATA is currently advertising a contract to procure the bridge light assemblies (poles & fixtures) for the new SFOBB east span. It is proposed an addendum be issued with 7 items, 6 of which provide minor clarifications to the contract with the 7<sup>th</sup> item providing for the elimination of the procurement of the light fixtures from that contract.

The light fixtures would be eliminated in order to change the current metal halide light to a LED light. This change would be consistent with current Caltrans policies to move towards the lower energy-consuming LED light. The change would also improve the quality of the bridge lighting which requires directional lights spanning across the 5 lanes of traffic from the center of the bridge.

The BATA procurement contract is on schedule for an August 11, 2010 bid opening. It is anticipated that the procurement of the LED fixtures would be performed under the SAS contract. The estimated procurement cost of \$3,500,000 would be transferred from the funding previously approved for the BATA procurement contract to the SAS

## *Memorandum*

contract with no net cost impact. Cost savings from the previously eliminated fixture lowering system are anticipated to offset any increased cost of the LED fixtures.

**Attachment(s):**

Addendum Item List

SFOBB MEP Integration Strategy Spreadsheet

<u>Addendum Item</u>	<u>Reference</u>	<u>Change</u>
1.	Light Fixtures and other Electrical components under sections Section 10-3.01, Section 10-3.02, and section 10-3.03, pages 35 - 39	<p><b>All electrical components of the “Lighting Assemblies” are eliminated.</b></p> <p>All lighting fixtures including marker lights (and its stainless base, cap and bird spike), ballasts, ballast enclosures, wiring and brackets (that attach the light fixtures to the pole) for all roadway poles including Roadway Luminaires, Viaduct poles and Belvedere poles are eliminated from this contract.</p> <p>Please note that all structural components including original location of holes for fixture attachments, pole reinforcement plates, access holes, handholes and all brackets for future TOS-CCTV, TOS-MVDS and CCTV’s are to be fabricated as shown on the plans.</p>
2.	Schedule table under Section 10-3.08 LIGHTING ASSEMBLIES DELIVERY SCHEDULE on page 43 of Appendix A	The schedule table will be replaced with the attached schedule table.
3.	Subsection PAINTING of Section 10-1.01 on page 26 of Appendix A.	<p>First Paragraph:</p> <p>Blast cleaned surfaces shall receive a single undercoat of an inorganic zinc coating and a single finish coat of a polysiloxane paint approved by the manufacturer of the inorganic zinc coating. <i>All coatings shall be applied prior to delivery of materials to the project site.</i></p>
4.	Subsection Prototype of Section 10-3.04 FABRICATION on Page 40 of Appendix A	<p><i>Prior to fabricating any poles of particular type or height, the following 4 prototype poles shall be fabricated for inspection and approval of the engineer:</i></p> <p><i>A Prototype for the 20 meter poles, specifically pole # 1302-6.</i></p> <p><i>A Prototype for the 7 meter poles.</i></p> <p><i>A Prototype for the Viaduct poles.</i></p> <p><i>A Prototype for the Belvedere poles.</i></p> <p><i>If the prototype poles are accepted by the</i></p>



		<p><i>engineer, they would be purchased at contract item price for each pole and shall be delivered as spares.</i></p> <p><del>Prior to fabricating all poles of a particular type or height, a prototype pole kit shall be fabricated for inspection and approval by the Engineer. The prototype shall be a working replica of the pole unit and include the luminaires, luminaire ballast enclosure and marker light.</del></p> <p>If the Contractor chooses to fabricate poles prior to the approval of the prototype by the Engineer, the cost of any changes to the poles due to changes in the prototype shall be borne by the Contractor.</p>
5.	Section 10-3.09 PAYMENT on page 44 of Appendix A	<p><b>Unloading</b></p> <p><i>The unloading of the pole at the storage site will be done by others. The fabricator must provide a 72 hours written notice to the Engineer prior to each delivery, so that proper arrangements can be made for unloading of the poles.</i></p> <p><i>The cradle type dunnage, which will be used to securely transport the poles shall remain with the poles at the storage site, and the cost for providing the dunnage shall be included in the unit cost of the poles and no other compensation would be made.</i></p> <p><b>Roadway Lighting Assembly</b></p> <p>The contract unit price paid for the roadway lighting assembly of the types and heights listed in the Engineer's estimate shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals for furnishing, fabricating and assembling the poles <del>in kit form</del> including base plates, <del>roadway luminaires, luminaire ballast enclosures,</del> handholes, cable access openings, cable hooks, neoprene gaskets, conduit fittings, device mounting plates, <del>marker lights,</del> anchor bolt templates and for doing all the work involved in assembly of components including <del>internal wiring,</del> galvanizing, painting and finishing, prototype testing <del>including services of suppliers technical representative,</del> packing, transporting, <del>unloading</del> and storage as shown on the plans, as specified in the Standard</p>

		<p>specifications and these special provisions, and as directed by the Engineer.</p> <p>Full compensation for <del>disassembly—of removable components used for prototype testing, packing, transporting, unloading</del> and storage in designated storage facilities shall be considered as included in the contract unit price paid for roadway lighting assembly of the types and heights in the Engineer's estimate and no additional compensation will be allowed thereof.</p> <p>A cost breakdown shall be provided for each type and height of roadway lighting assembly listed in the Engineer's estimate in accordance with "Cost Breakdown" of these special provisions.</p>
6.	Letter of Invitation, Bid Submission, Paragraph 4, Page1	<b>Interested bidders must submit their bids in sealed envelopes by <del>4:00</del> 2:00 p.m. on August 11, 2010.</b>
7.	Letter of Invitation pages 2-4, Invitation for Bid Header section, pages 1-10, Appendix A through Appendix I	Contract No. BATA- <del>006</del> 007

# SFOBB MEP Integration Strategy (CONFIDENTIAL)

7/13/2010

	Segregation of Work	Approximate Costs	Revised Cost	Comments
<b>A</b>	<b>Furnish Light Poles &amp; Fixtures (BATA Contract)</b>			
ITEM 1A	Furnish Light Poles & Fixtures (estimate is done by Caltrans Design)	\$15,300,000.00	\$11,800,000.00	Estimated cost savings of \$3,500,000 is anticipated due to elimination of the lowering device, all lighting fixtures and electrical components. LED light fixtures and all of electrical components will be added to item 1B below as part of installation CCO.
ITEM 2A	Storage Cost	\$1,500,000.00	\$1,500,000.00	No Change
	Contingency (Included in the above)			
	<b>Total Estimated Cost To Furnish Light Poles &amp; Fixtures (BATA Contract)</b>	<b>\$16,800,000.00</b>	<b>\$13,300,000.00</b>	Reduced by \$3.5M
<b>B</b>	<b>MEP Integration Work Installation (Proposed CCO to SAS)</b>			
ITEM 1B	Install Light Poles (Skyway and OTD1)	\$2,000,000.00	\$5,500,000.00	Estimated cost increase of \$3,500,000 is added to this item for procurment and instaletion of light fixtures (LED fixtures) and all of the electrical components, which is being eliminated from BATA contact above.
ITEM 2B	Installation of MEP items eliminated from Skyway & OTD1	\$8,000,000.00	\$8,000,000.00	No Change
ITEM 3B	Upgrades & Revisions of the already installed components (Skyway & OTD1)	\$2,500,000.00	\$2,500,000.00	No Change
ITEM 4B	Installation of BASE System (conduits & Cabinets within Skyway & OTD1)	\$2,000,000.00	\$2,000,000.00	No Change
ITEM 5B	Contingency	\$2,900,000.00	\$2,900,000.00	No Change (contingency for revised cost on item 1B was included in that item)
	<b>Total Estimated Cost For Installation</b>	<b>\$17,400,000.00</b>	<b>\$20,900,000.00</b>	No Change
<b>Total for Light Poles &amp; MEP Integration Work (within Skyway &amp; OTD1)</b>		<b>\$34,200,000.00</b>	<b>\$34,200,000.00</b>	No Change
<b>C</b>	<b>System Wide Testing (Entire Corridor) (Proposed future CCO to SAS)</b>			
ITEM 1C	System wide (Entire Corridor) testing, Relay Setting, SCADA development & commissioning	\$3,000,000.00		No Change
ITEM 2C	Resolution of system wide testing issues (for entire corridor)	\$1,500,000.00		No Change
ITEM 3C	Contingency (20%)	\$900,000.00		No Change
	<b>Total Estimated Cost Of System wide Testing</b>	<b>\$5,400,000.00</b>		No Change
<b>D</b>	<b>Complete BASE System (Entire Corridor)</b>			
ITEM 1D	Hardware (about 150 cameras, interface box and decoder for each camera / wiring)	\$3,000,000.00		No Change
ITEM 2D	Installation cost (Camera & Hardware)	\$1,500,000.00		No Change
ITEM 3D	New dedicated fiber line in both structures with 2 loops (installed)	\$2,000,000.00		No Change
ITEM 4D	Contingency (20%)	\$1,300,000.00		No Change
	<b>Total Estimated Cost for BASE System</b>	<b>\$7,800,000.00</b>		No Change
<b>Total Additional Funds Needed</b>		<b>\$13,200,000.00</b>		No Change



## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee      **DATE:** July 8, 2010  
(TBPOC)

**FR:** Tony Anziano, Toll Bridge Program Manager, Caltrans

**RE:** Agenda No. - 5  
Item- Dumbarton/Antioch Bridge Seismic Retrofit Update

---

**Recommendation:**

For Information Only

**Cost:**

N/A

**Schedule Impacts:**

N/A

**Discussion:**

A verbal update on the Dumbarton and Antioch Bridge Seismic Retrofit contracts will be provided at the July 13<sup>th</sup> meeting.

**Attachment(s):**

N/A

## **ITEM 6: OTHER BUSINESS**

No Attachments

## **ITEM 7: TBPOC/ ABF/ TYLMN DISCUSSION**

### **a. Self-Anchored Suspension (SAS)**

**Superstructure Mitigation and Acceleration  
Update**